

Economic and Revenue Forecast

Fiscal Year 2012
Fourth Quarter

June 2012



WASHINGTON STATE DEPARTMENT OF
Natural Resources
Peter Goldmark - Commissioner of Public Lands

Acknowledgements

The Washington Department of Natural Resources' (DNR) *Economic and Revenue Forecast* is a collaborative effort. It is the product of information provided by private individuals and organizations, as well as DNR staff. Their contributions enhance the quality of the Forecast.

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In the final analysis, the views expressed are our own and may not necessarily represent the views of the contributors or reviewers.

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Acronyms and abbreviations

bbf	Billion board feet
BLS	U.S. Bureau of Labor Statistics
CAD	Canadian dollar
CNY	Chinese yuan (renminbi)
CPI	Consumer Price Index
CY	Calendar Year
DNR	Washington Department of Natural Resources
ECB	European Central Bank
FDA	Forest Development Account
Fed	U.S. Federal Reserve Board
FOMC	Federal Open Market Committee
FY	Fiscal Year
GDP	Gross Domestic Product
IMF	International Monetary Fund
ISM	Institute for Supply Management
mbf	Thousand board feet
mmbf	Million board feet
NAFTA	North American Free Trade Agreement
OPEC	Organization of Petroleum Exporting Nations
PPI	Producer Price Index
Q1	First quarter of year (similarly Q2, Q3, and Q4)
QE2	Quantitative Easing, Round 2
RCW	Revised Code of Washington
REIT	Real Estate Investment Trust
RISI	Resource Information Systems, Inc.
RMCA	Resource Management Cost Account
SA	Seasonally Adjusted
SAAR	Seasonally Adjusted Annual Rate
TIMO	Timberland Investment Management Organization
USD	U.S. dollar
USFS	U.S. Forest Service
WWPA	Western Wood Products Association
WTO	World Trade Organization
¥	Japanese yen



Preface

This *Economic and Revenue Forecast* projects revenues from Washington state lands managed by the Washington State Department of Natural Resources (DNR). These revenues are distributed to management funds and beneficiaries as directed by statute. The Forecast revenues are organized by source, fund, and fiscal year.

DNR revises its Forecast quarterly to provide updated information for trust beneficiaries and state and department budgeting purposes. See the Forecast calendar at the end of this section for release dates. We strive to produce the most accurate and objective forecast possible, based on current policy direction and available information. Actual revenues depend on DNR's future policy decisions and changes in market conditions beyond our control.

This Forecast covers fiscal years 2012 through 2015. Fiscal years for Washington State government begin on July 1 and end on June 30. For example, Fiscal Year 2012 runs from July 1, 2011 through June 30, 2012.

The baseline date (the point that designates the transition from “actuals” to forecast) for this Forecast is May 1, 2012. The forecast numbers beyond that date are based on the most up-to-date DNR sales and revenue data available at the time of their estimation, including DNR's timber sales results through May 2012. Macroeconomic and market outlook data and information are the most up to date available as the forecast document is being written.

Unless otherwise indicated, values are expressed in nominal terms without adjustment for inflation. Therefore, interpreting trends in the Forecast requires attention to inflationary changes in the value of money over time separate from changes attributable to other economic influences.

Each DNR Forecast builds on the previous one, emphasizing ongoing changes. Before preparing each Forecast, world and national macroeconomic conditions and the demand and supply for forest products and other commodities are reevaluated. The impact on projected revenues from DNR-managed lands is then evaluated, given the current economic conditions and outlook.

DNR Forecasts provide information used in the *Washington Economic and Revenue Forecast* issued by the Washington State Economic and Revenue Forecast Council. The release dates for DNR's Forecasts are determined by the state's Forecast schedule as prescribed by RCW 82.33.020. The table below shows the anticipated schedule for DNR's future *Economic and Revenue Forecasts*.

Economic Forecast Calendar

Forecast Title	Baseline Date	Draft Revenue Data Release Date	Final Data and Publication Date (approximate)
September 2012	August 1, 2012	Sept. 7, 2012	Sept. 28, 2012
November 2012	October 1, 2012	Nov. 2, 2012	Nov. 30, 2012
March 2013	February 1, 2013	March 1, 2013	March 29, 2013
June 2013	May 1, 2013	June 7, 2013	June 28, 2012



Introduction and Forecast Highlights

U.S. Economy and Housing Market. After offering some encouragement earlier in the year, the budding U.S. economic recovery seems to have stalled out in recent months. Nevertheless, the U.S. unemployment rate has been steadily moving down since the end of 2009 and stands at 8.2 percent as of May. There are 4.3 million more jobs in the United States than at the end of 2009. New housing starts are finally creeping up from the historically low level they have been in for the last three years. But the fragile economy faces serious challenges—there are still too many unemployed workers, foreclosed residential properties will weigh down the housing market for years to come, the European financial crisis drags on, China’s economy is slowing, political gridlock paralyzes Washington, D.C., and state and local government cutbacks continue.

Log and Lumber Prices. Pacific Northwest log prices continue to hold relatively steady, with the price for a “typical” DNR log delivered to the mill averaging \$475/mbf over the first five months of 2012, down slightly from an average of \$481/mbf for all of 2011. West Coast lumber prices are up a little from last year, with the Random Lengths’ Coast Dry Random and Stud composite lumber price averaging \$282/mbf for the first four months of 2012, compared with an average of \$270/mbf for all of 2011.

Timber Sales Prices. Through the first eleven months of nearly-completed FY 2012, DNR timber sales prices have averaged \$309/mbf, compared with the \$282/mbf price projected for the entire fiscal year in the three previous Forecasts. The FY 2012 average sales price is raised to \$301/mbf in this Forecast based on the higher year-to-date results as tempered by an expected lower June average sales price on higher than average monthly sales volume. Since a significant recovery in the U.S. housing market is not foreseen over the next several years, we are holding the projected FY 2013 timber sales price at \$274/mbf and the FY 2014 and 2015 prices at \$300/mbf. An earlier housing recovery would pull DNR’s timber sale prices higher.

Timber Sales Volume. With FY 2012 nearing its end, projected timber sales volume for the fiscal year is revised downward to 553 mmbf from 656 mmbf since actual volume sold has not matched the earlier target. Previous Forecasts have tied projected timber sales volumes through FY 2014 to the decadal sustainable harvest level established in 2004. This Forecast removes this constraint because updated timber sales plans strongly indicate that this assumption is no longer realistic. Accordingly, the previous FY 2013 and 2014 timber sales volume target levels of 667 mmbf annually are lowered to 580 and 562 mmbf based on updated timber sales estimates. If actual sales results follow these projections, the shortfall on the 5,500 mmbf decadal target for Westside timber sales would be about 275 mmbf. Timber sales volume for FY 2015, which is in the next sustainable harvest decade, is reduced by 10 mmbf to 587 mmbf, reflecting a lower level projection of Eastside sales.

Timber Removal Volume and Prices. In line with the reductions to projected timber sales levels, projected timber removal volumes are also adjusted downward in all years. The largest impact is in FY 2014, when timber removals are projected to be down from 711 to 573 mmbf (a 19 percent reduction). Removal volumes for the other years FYs 2012, 2013, and 2015 are forecast to be down three, nine, and six percent respectively. As a result of increasing the FY 2012 average timber sales to \$301 from \$282, projected timber removal prices are increased to \$317, \$289, and \$285/mbf for FYs 2012, 2013, and 2014 respectively. FY 2015's forecast timber removal price is unchanged at \$293/mbf.

Bottom Line for Timber Revenues. There are significant reductions to projected timber revenues because of the reductions in projected timber sales volumes in FYs 2012, 2013, and 2014. The timber revenue projection for the 2011-2013 Biennium is revised downward four percent from \$336.2 million to \$323.3 million. For the 2013-2015 Biennium, the projected revenue from timber removals is revised down 12 percent from \$389.1 million to \$341.7 million.

Uplands and Aquatic Lands Lease (Non-Timber) Revenues. In addition to revenue from timber removals on state lands, DNR also receives sizable revenues from leases on uplands and aquatic lands. With revenues now expected to be approximately \$18.0 million for the current fiscal year, FY 2012 will be the best year ever for revenues from DNR agricultural leases—due to a combination of a by-far record year for irrigated crop lease revenues, a near-record year for orchard and vineyard lease revenues, and the second highest year from dryland crop leases. As a result, the forecast for agricultural lease revenues for FY 2012 is increased by \$3.0 million. Commercial lease revenue for FY 2012 is increased by \$0.75 million to \$10.25 million as revenues are exceeding our earlier cautious projection.

Estimated aquatic lands revenues are raised by \$9.9 million in FY 2012 to reflect the results of two geoduck auctions held since the last Forecast. The February auction yielded the second-highest average price (\$/lb.) on record. At the time of the February 2012 Forecast it was uncertain whether DNR would hold another geoduck auction (after February's) during the fiscal year, so it was not included in the Forecast. The auction was in fact held and resulted in \$8.0 million in revenue on higher than typical volume. Aquatic lands revenues are also increased \$2.2 million, \$2.3 million, and \$2.3 million in FYs 2013, 2014, and 2015 respectively as a result of raising those years' projected average geoduck auction prices (\$/lb.).

All together, current 2011-2013 Biennium revenues from leases on uplands and aquatic lands are projected to be \$139.7 million, up 13 percent from \$123.9 million in the February 2012 Forecast. For the 2013-2015 Biennium these revenues are projected to be \$125.9 million, up four percent from the previous \$121.4 million.

Risks to the Forecast. Compared with previous Forecasts, the risk of not realizing projected timber sales volumes is greatly reduced by doing away with the assumption that timber sales volumes through FY 2014 would need to be high enough to match the decadal sustainable harvest level. Even so, falling short of projected timber sales volumes due to potential environmental and policy issues remains the largest risk to the Forecast. Also on the down side are the many challenges to U.S. economic recovery cited in the opening paragraph above.



Part 1. Macroeconomic Conditions

This section briefly reviews current and predicted conditions in the United States and world economies, because they affect the bid prices for DNR timber sales as well as lease revenues from DNR-managed uplands and aquatic lands.

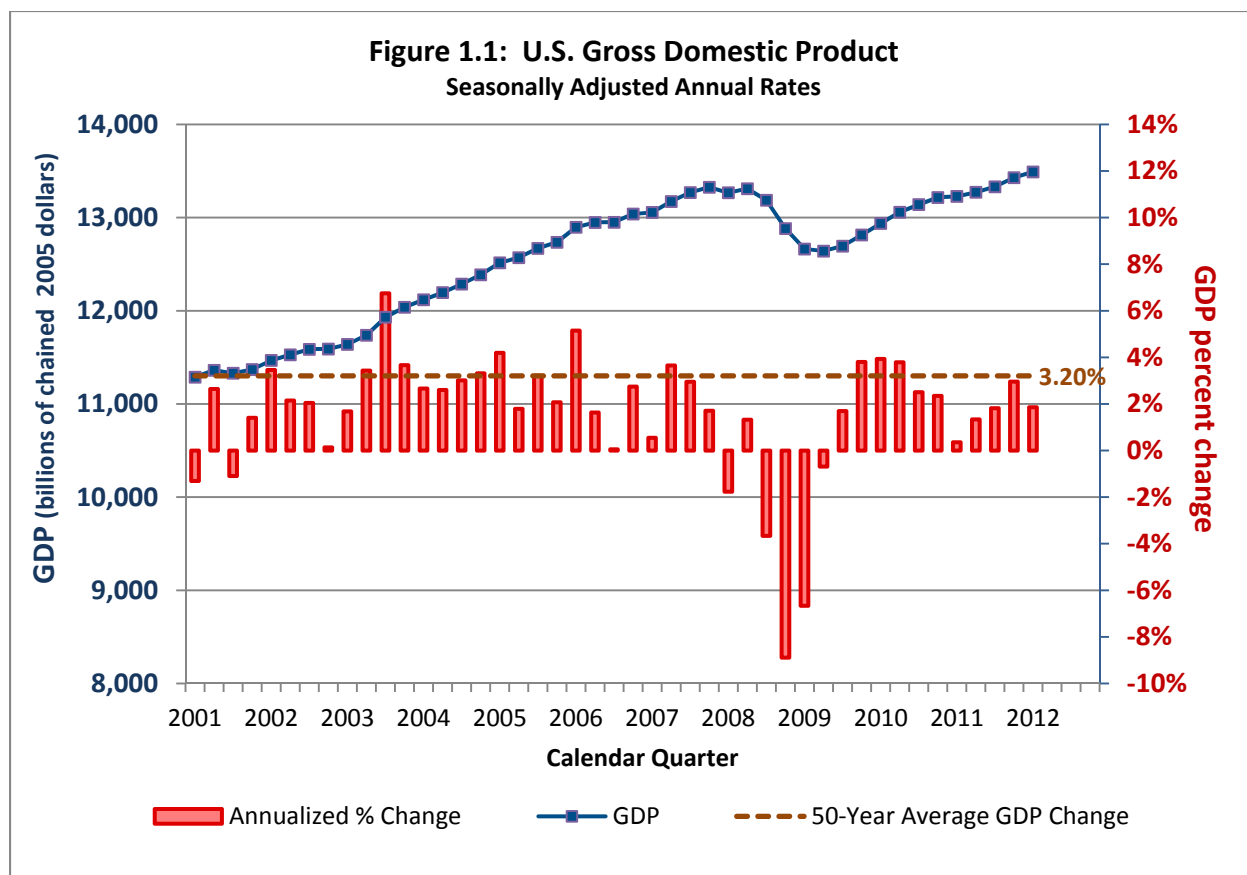
International supply and demand also affect domestic timber stumpage and lumber prices. On the supply side, for example, Canada has a strong influence on the U.S. wood products sectors as it is a major source of lumber that enters U.S. markets quite readily. On the demand side, China is an important market for commodities including logs and geoducks.

U.S. economy

As I noted, our economy has been expanding for nearly three years now. But the pace of growth has been considerably less robust than in the typical post-World War II recovery. And the gains have been halting. Sometimes the economy seems to build up a head of steam. At other times, the momentum flags. This sputtering progress reflects a constellation of forces that has weighed on economic performance, including the most traumatic housing crash since the Great Depression, tight credit, and widespread uncertainty.

*John C. Williams, President and CEO, Federal Reserve Bank of San Francisco
“The Economic Outlook: Global and Domestic Challenges to Growth”
Presentation to Seattle-Area Community Leaders
Bellevue, WA
June 6, 2012*

Gross Domestic Product (GDP). The Great Recession’s effect on the U.S. economy is clearly reflected in U.S. real gross domestic product (GDP)—the total output of goods and services produced by labor and property located in the United States, minus inflation. **As Figure 1.1** shows, GDP actually fell for five out of six quarters during 2008 and the first half of 2009. The worst quarters for GDP decline during the recession were Q4 2008 and Q1 2009, at -8.9 percent and -6.7 percent respectively. It took until almost four years—until Q3 2011—for real GDP to re-ascend to its pre-recession peak (Q4 2007).



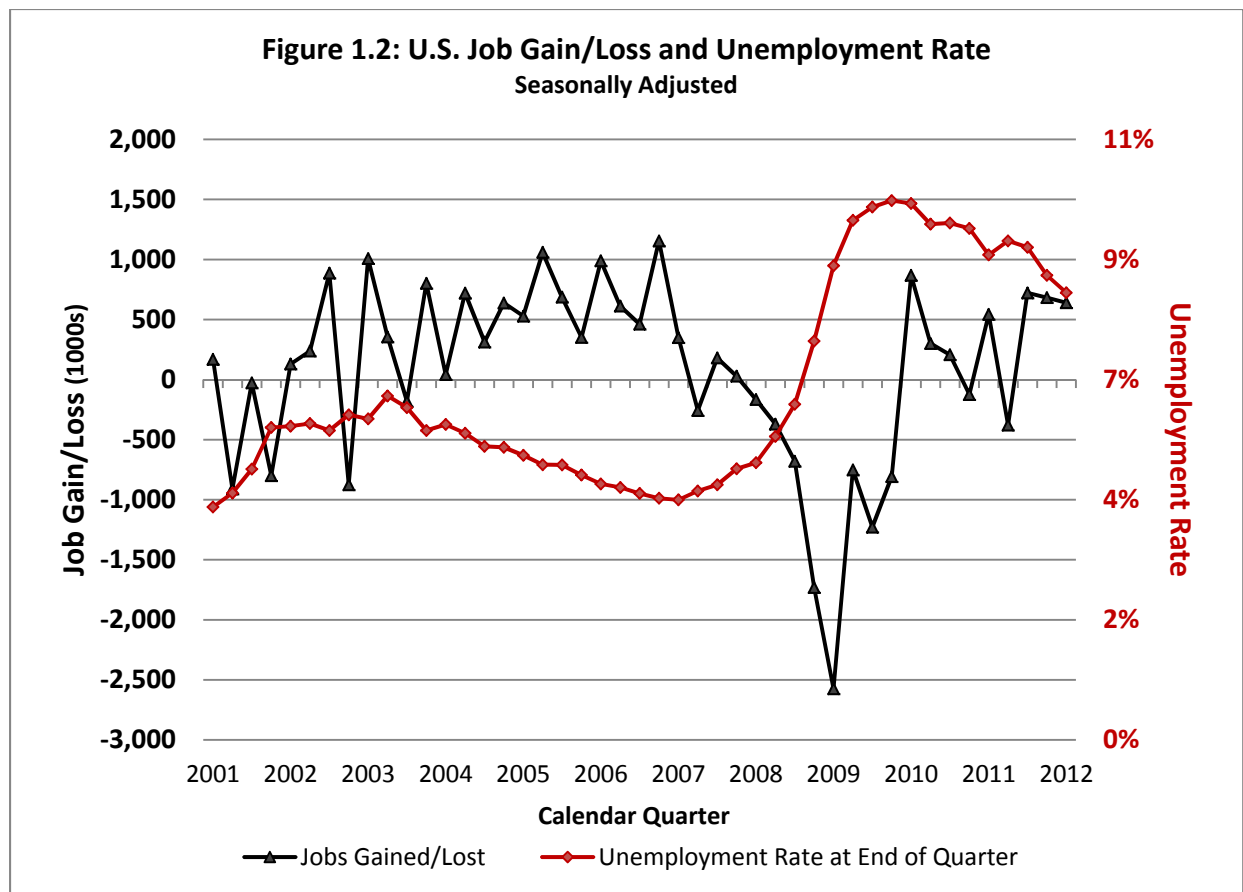
From Q4 2009 through Q2 2010, growth resumed at a slightly higher rate than before the recession began, with annualized GDP growth rates in the 3.8 to 3.9 percent range. Growth accelerated in each quarter of 2011 and averaged 1.6 percent for the year, but backed off slightly to 1.9 percent in the first quarter of 2012 (see **Figure 1.1**).

The IMF and Blue Chip Consensus projections are both 2.1 percent for 2012 and 2.4 percent for 2013.

Employment. As shown by the red line in **Figure 1.2**, the national unemployment rate has been unsteadily falling from its high point of 10.1 percent in October 2009 to 8.2 percent in May 2012. Job growth has improved from a year ago but, despite May's strong showing (422,000 new jobs), month-to-month changes have been quite volatile.

The alternative unemployment rate, U-6, measures unemployment, involuntarily part-time employment, and marginally attached workers, and so provides a more complete picture than May's 8.2 percent headline rate. The U-6 reached 14.8 percent in May, down slightly from January but significantly higher than the 8.3 percent 2006-2007 average.

Were it not for the lack of growth in the labor force, the U.S. unemployment rate would be even higher than it is. The labor force usually grows about 0.7 percent each year due to population



growth (natural increase plus net immigration), but the total number of persons in the labor force has been stagnant in the last 3.5 years. The recession has slowed population growth in large part because it has slowed immigration; there is evidence that it has also lowered the U.S. birth rate. In addition, many discouraged Americans have dropped out of the labor force and stopped looking for work, and so are excluded from these indicators.

The recession has also expanded the ranks of the long-term unemployed to an extent not seen since the Great Depression. In May, there were 5.4 million people who had been unemployed for over six months (an improvement over the peak of 6.7 million in May 2010) and the average duration of unemployment was 39.7 weeks—still near the record high of 40.9 weeks in November 2011. This contrasts with an average of 18.2 weeks from 2003 through 2007.

[American business] still seems to be chugging along—so it's not strong, but it's not weak. Businesses have a lot of capital, they have earnings. What we really need are jobs. Jobs will drive everything else.

*Jaime Dimon, Chief Executive, J.P. Morgan Chase
June 13, 2012*

Consumption. Real personal consumption expenditures increased 2.7 percent in Q1 2012, compared with an increase of 2.1 percent the previous quarter. Spending on durable goods increased 14.3 percent, bolstered by a 22.2 percent increase in consumption of motor vehicles

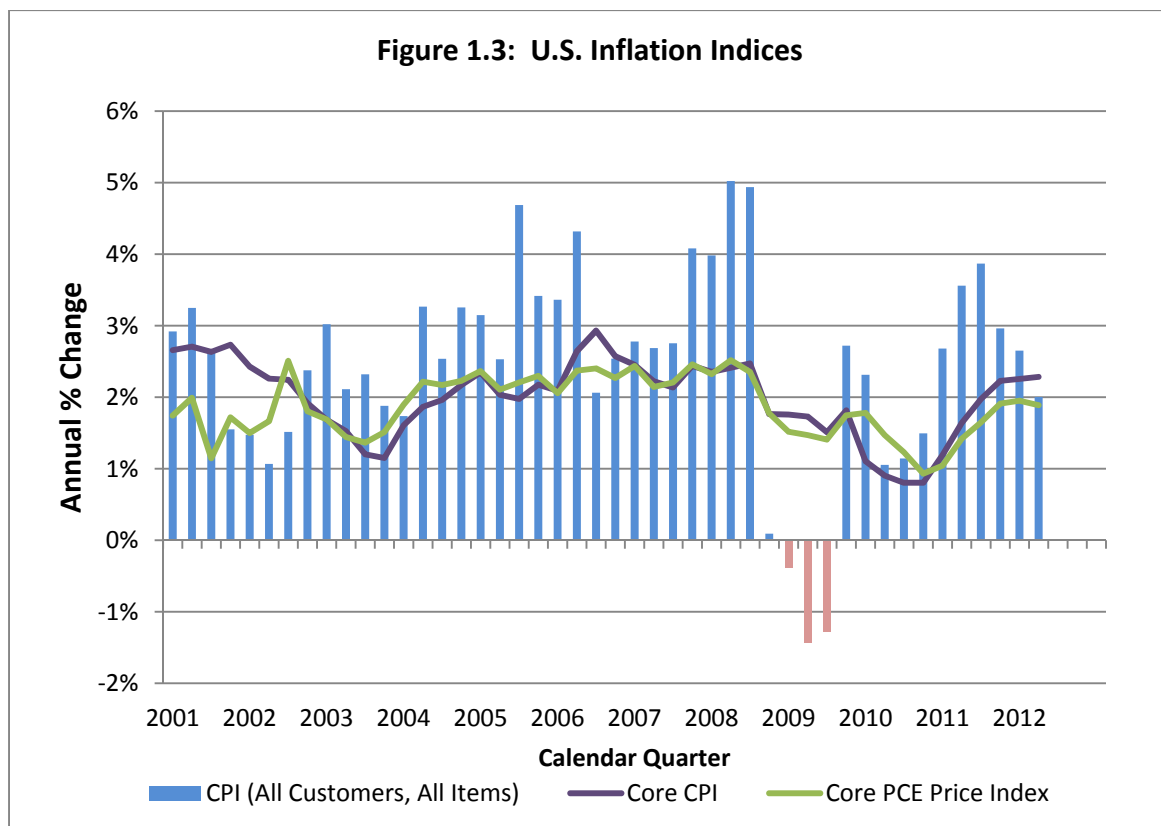
and parts, a 10.8 percent increase for recreational goods and vehicles, and a 9.5 percent increase for furnishings and durable household equipment. There is reason to believe that the increase in automobile purchases reflects replacement of deteriorating cars rather than a robust demand increase. Consumer spending on services increased by only 1 percent on a quarter-over-quarter basis, with a 2.3 percent decrease in housing and utilities and a 4.8 percent increase in financial services and insurance.

American consumers have had their confidence deeply shaken; continued uncertainty about the U.S. economic recovery and prevalent unemployment fears continue to restrain their spending. Furthermore, employed Americans are paying off debt and saving rather than consuming: debt-to-income is as low as it was in 1985 (16 percent, down from 19 percent in 2009).

Interest Rates. U.S. interest rates remain at or near record lows. The Fed funds rate has remained in the 0.0-0.25 percent range since December 2008 and in late January the FOMC pledged to keep rates near zero at least through late 2014. Ten-year U.S. Treasury bonds closed at a record low 1.47 percent on June 1.

Average rates on closed conventional 30-year fixed rate mortgages were at a new low of 3.96 percent in March, having fallen for 12 consecutive months before rising to 4.04 percent in April.

Inflation. **Figure 1.3** shows several measures of the U.S. inflation rate. The bars—representing headline inflation, measured by changes in the Consumer Price Index (CPI)—show that consumer prices in the United States fell precipitously in Q4 2008 and did not begin to recover

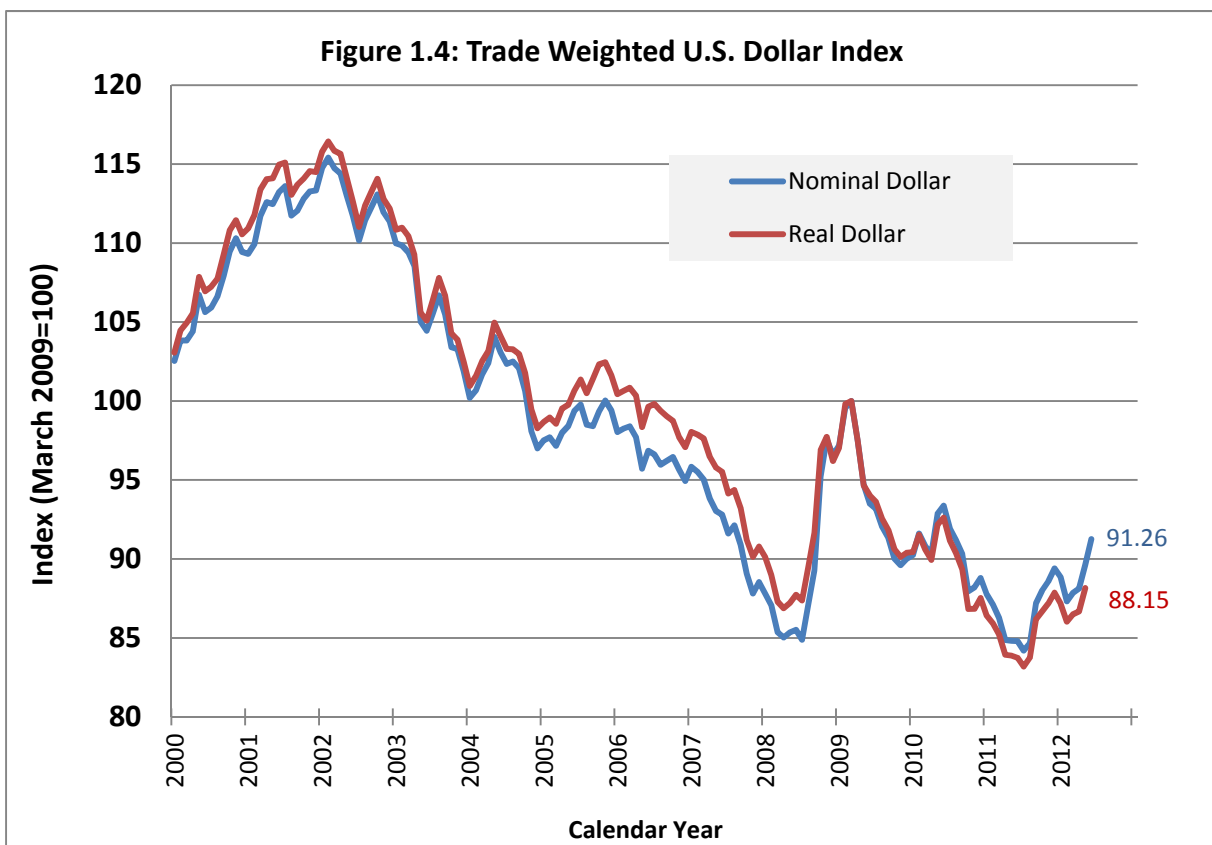


until Q4 2010. In effect, inflation was zero over that two year period. The CPI increased more rapidly through the first three quarters of 2011 before falling back to 3.0 percent (annual rate) in Q4. It has declined in every month since then.

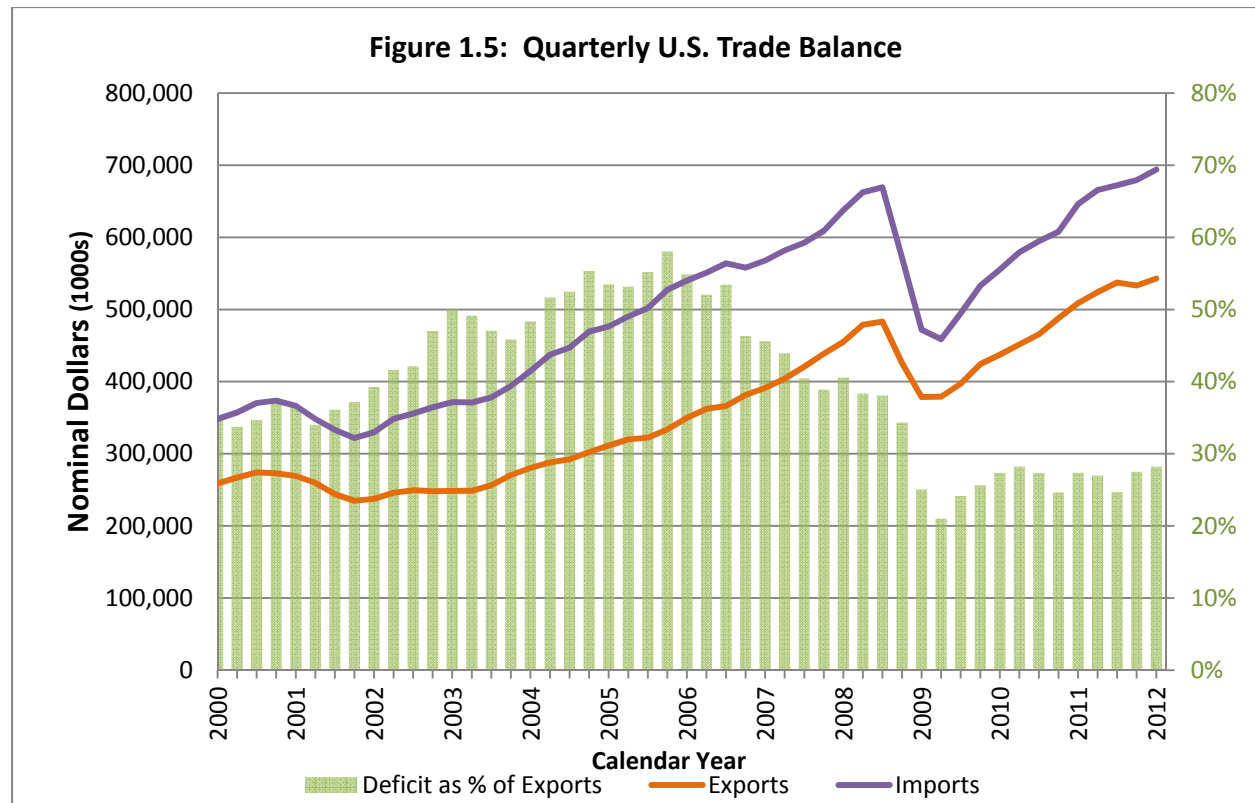
Figure 1.3 also shows two alternative measures of inflation—core CPI and the core personal consumption expenditures (PCE) price index—that exclude purchases of historically volatile goods such as energy and food and provide a more realistic measure of underlying long-term inflation. The PCE price index is preferred by the Federal Reserve; it shows that long-term inflation has been below 2 percent since late 2008, and appears to be dropping as Q2 2012 closes.

The U.S. Dollar and Foreign Trade. **Figure 1.4** shows the broad trade-weighted U.S. dollar index for the last 12 years. The broad index is a weighted average of the foreign exchange values of the U.S. dollar against the currencies of a large group of major U.S. trading partners. In July 2011, the index in real terms fell to its lowest point in the history of the data series, which began in January 1973. At the low, the U.S. dollar index was off 29 percent from its high in early 2002. Since July 2011, the dollar has strengthened off the bottom.

Declines in the dollar's trade value make American goods cheaper and more competitive relative to foreign goods. This supports U.S. exports, boosting economic growth. However, it also leads to higher prices for imports which is part of why oil and gasoline prices increased in dollar terms from 2009 through much of 2011 (see **Figure 1.6**).



In 2011, the total U.S. trade deficit was \$560 billion, which is the difference between \$2.10 trillion in exports and \$2.7 trillion in imports. The United States actually had a \$179 billion surplus on trade in services but this was outweighed by the much larger \$739 billion deficit on trade in goods. As **Figure 1.5** shows, the U.S. trade deficit as a percentage of exports was about 27 percent—virtually unchanged from 2010. Q1 2012 suggests that the deficit may widen for 2012 as a whole. Because of our economy’s thirst for crude oil, the trade item which has far and away the largest contribution to the trade deficit is petroleum products. In an interesting development, the United States has recently become a net exporter of refined petroleum products.



World economy

It may be an overstatement to say that the world's economy is in crisis, but if so it is only a slight overstatement. Unemployment in the United States is abnormally high, and it is substantially higher in much of Europe. Europe's finances are in a terrible state, and its output is falling, contributing to economic slowdowns in China and other expanding economies, such as India and Brazil, and harming U.S. exports.

*Richard Posner
June 10, 2012*

The U.S. economy does not exist in isolation and the world is becoming more economically interconnected. World events and the performance of other countries' economies have impacts, for better and worse, on the U.S. economy.

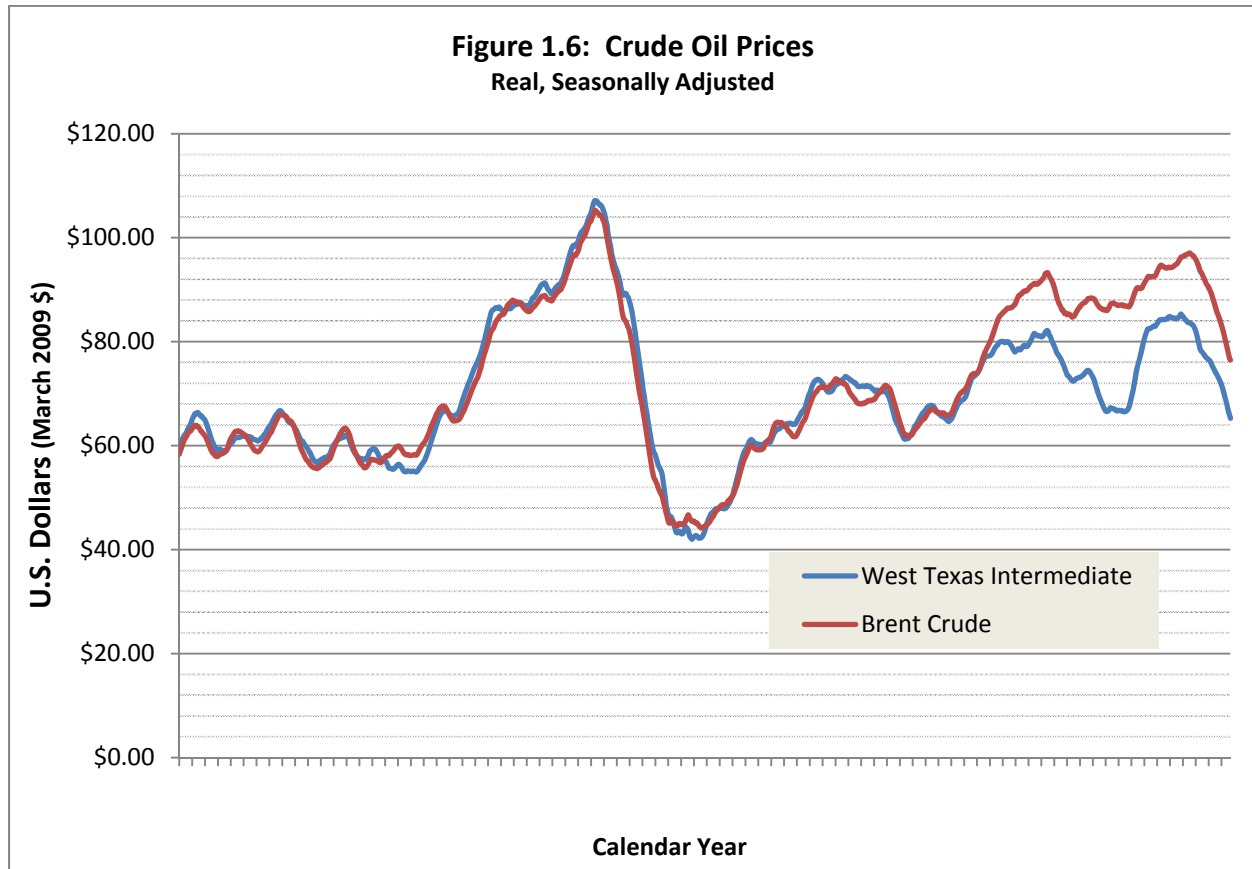
Europe. By most accounts, Europe is now in recession. The European crisis is in fact two crises: a sovereign debt crisis and a financial crisis. The uncertainties surrounding the Greek drama are much the same as they were at the time of the last Forecast, and there is a growing fear that the continued erosion of the much larger peripheral economies of Spain and Italy will collapse the center as well. Most interventions to date—austerity policies imposed nationally or as loan terms, minor write-offs of bad debt, European Central Bank (ECB) cash infusions to markets, EU loans to governments, and others—have been limited in scope and effect, and appear to be only stop-gap measures to buy time. The truly hard decisions, those that speak to the structural problems in the Eurozone and EU that allowed and now perpetuate the crisis, remain unaddressed.

China. China's economy has been slowing a bit, with a GDP growth rate of 9.2 percent in 2011 compared with 10.3 percent in 2010. In its February 6 China Economic Outlook, the International Monetary Fund (IMF) cut its forecast for China's 2012 growth rate from 9.0 to 8.2 percent, based on internal issues such as higher commodity prices, higher inflation rates, and the prospect of a housing bubble. In March, Premier Wen Jiabao cut the 2012 growth target to 7.5 percent. In recent years, China's housing construction exceeded demand, so construction is currently down, home prices are falling, sales volume is down, and inventories are building (similar to recent U.S. experience). The IMF economic report indicated that China's growth rate would drop even more abruptly if Europe experiences a sharp recession (because it depends so heavily on exports to the West) but that "a track record of fiscal discipline has given China ample room to respond to such an external shock."

There has been much discussion and speculation of a coming "hard landing" for China's economy, but the data and prospects are inconclusive. As in the United States, much depends on policy choices.

Petroleum. Crude oil prices and supply play an important role in the world and U.S. domestic economies, since crude oil and its derivatives affect production, transportation, and consumption. In addition, oil prices—especially fluctuations—have the ability to influence intangibles such as consumer and producer confidence. **Figure 1.6**, which presents six years of oil prices by the two

most important indicators, shows that 2012 has had the most dramatic crude oil price drop since 2008. While prices also declined this time last year before rising by year's end, there is nothing seasonal about this trend, as **Figure 1.6** has been adjusted to account for seasonality. This drop is one of the few points of optimism in the world economy, and it will benefit the U.S. economy for as long as it lasts.





Part 2. Log and Lumber Industry Factors

This chapter focuses on specific factors that affect timber stumpage prices and overall timber sales revenues received by the Washington State Department of Natural Resources (DNR). Timber stumpage prices reflect demand for lumber and other wood products, timber supply, and regional and local lumber mill capacity. The demand for lumber and structural wood products is directly related to the demand for U.S. housing and other end-use markets.

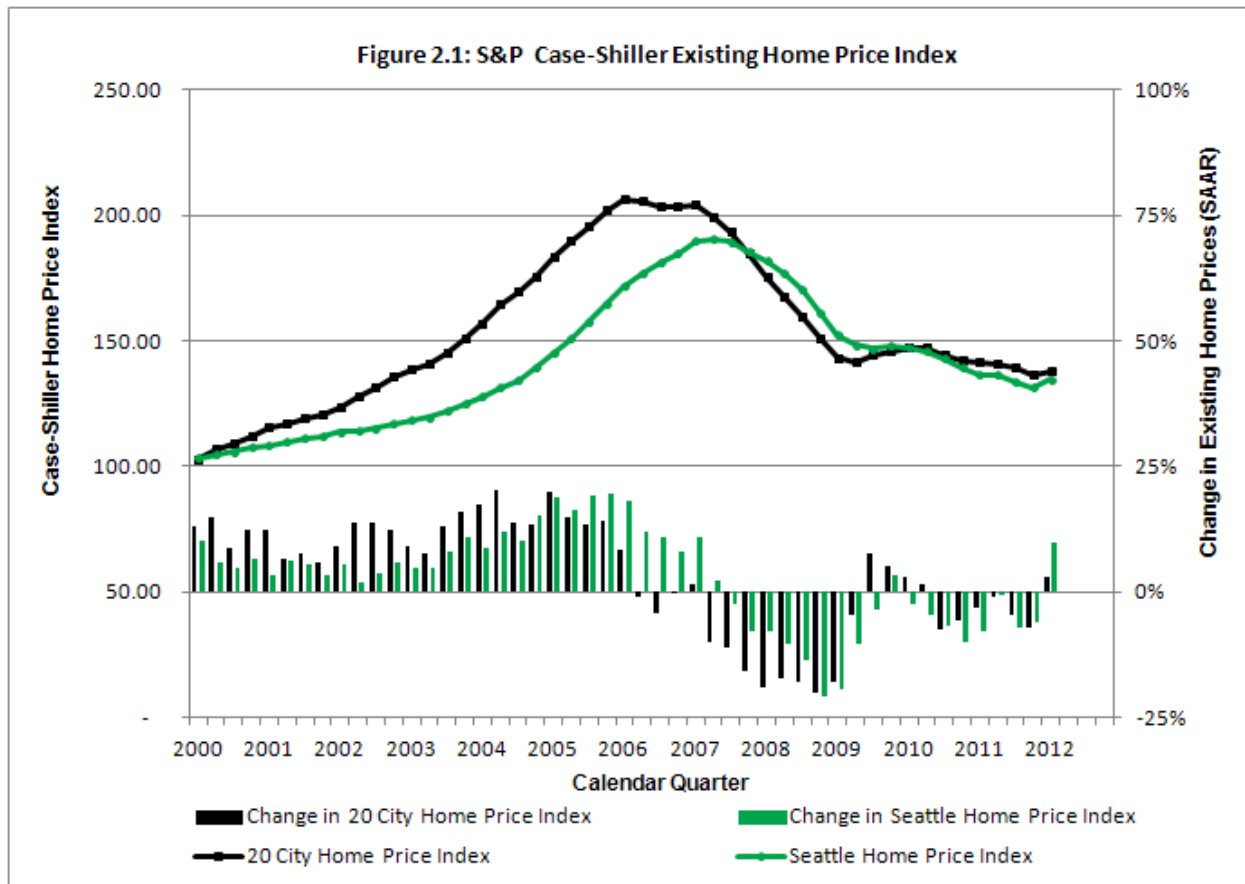
U.S. housing market

Housing Prices. The black line in **Figure 2.1** shows the precipitous fall in prices of existing homes in the United States from the beginning of 2007 to the beginning of 2009, as measured by the Case-Shiller existing home price index¹, a composite for 20 large U.S. cities. Existing home prices in the United States have fallen in 15 of the last 19 calendar quarters (see black bars on **Figure 2.1**) and reached a new post-2003 low in Q4 2011, when the average existing house was worth only 66 percent of what it was worth at the peak of the real estate bubble in Q1 2006. The existing home price index rose by three percent in the first quarter of 2012, the first rise after six consecutive quarters of home price declines.

The green line and green bars on **Figure 2.1** show the Case-Shiller existing home price index for Seattle. Seattle housing prices fell or were not changed for seventeen of the last eighteen quarters and dropped to a new post-2004 low in Q4 2011, when the average existing house was worth only 69 percent of what it was worth at the peak of Seattle's real estate bubble in Q2 2007. Existing home prices in Seattle rose sharply, by ten percent, in the first quarter of 2012, the first rise after eight consecutive quarters of falling prices (see **Figure 2.1**).

Many U.S. housing market experts think that nominal housing prices are bottoming out. Calculated Risk's Bill McBride points out, however, that there will be significant variability geographically across the U.S. and that areas with a large backlog of distressed properties, especially some states with a judicial foreclosure process, will probably see further price declines. Even if home prices may be finding a bottom, this doesn't mean prices will increase significantly any time soon. Usually towards the end of a housing bust, nominal prices

¹There is a significant time lag in the Case-Shiller index and March is the latest data available. Furthermore, the March index figure is an average of January, February, and March, so it is a report of conditions several months ago.



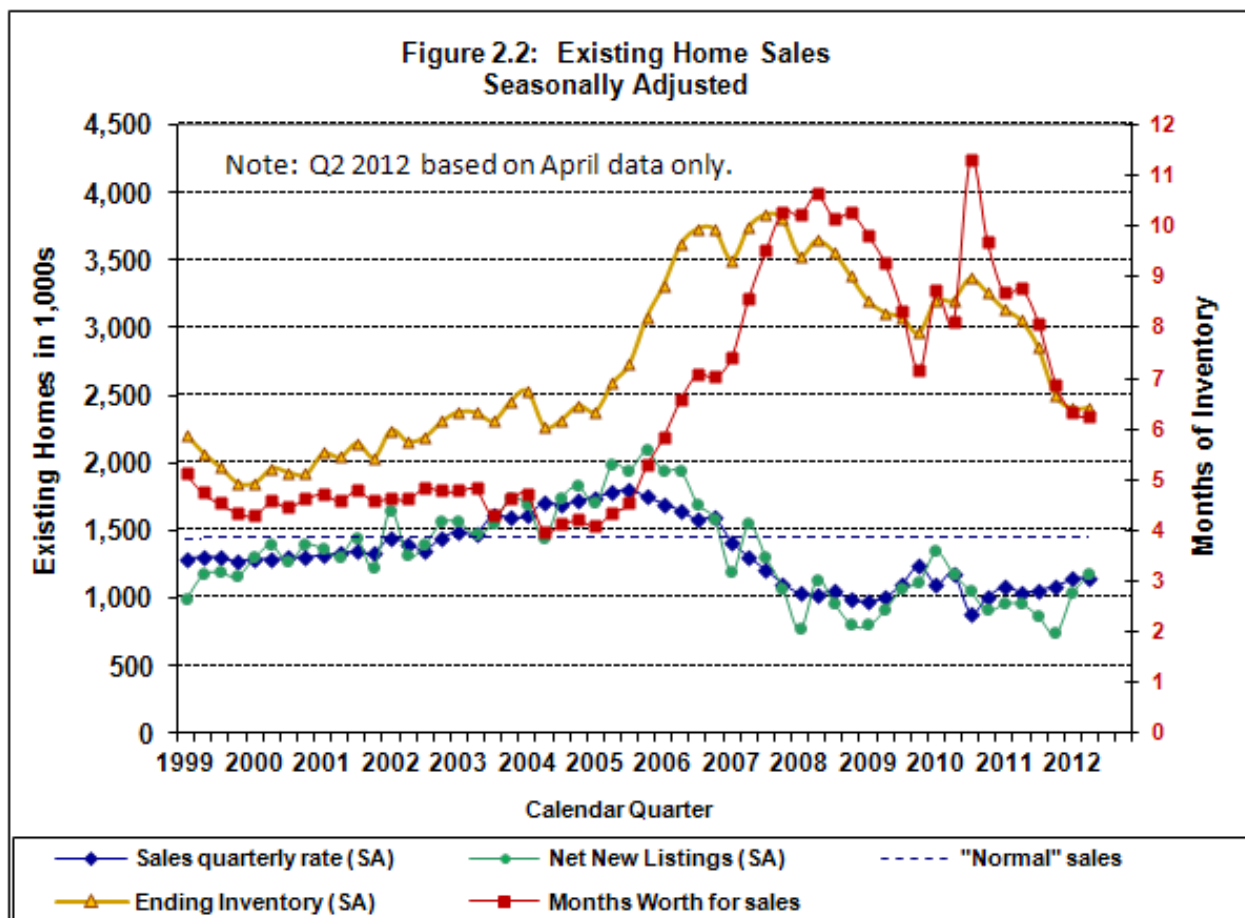
mostly move sideways for a few years, so real prices (adjusted for inflation) could even decline for another 2 or 3 years. But most homeowners and home buyers focus on nominal prices.

Existing Home Sales. From 1999 to 2005, the “normal” pre-bubble seasonally adjusted quarterly rate of existing home sales² in the United States was about 1.45 million units, or 6.8 million annually. After the housing market crash, existing home sales went as low as 0.89 million in Q3 2010, the worst quarter on record. After hovering around 1.05 million quarterly through 2011, the rate is up a little to 1.15 million in the first part of 2012 (see **Figure 2.2**). While not a big improvement, there does appear to be a trend upward from the bottom on existing home sales.

A good sign in the housing market is that the inventory of existing homes for sale has now fallen for six quarters in a row and is now down to 2.4 million, a level not seen for almost seven years (see **Figure 2.2**). This compares with 3.8 million used homes in the inventory in the last two quarters of 2007.

Another encouraging trend is the sharp fall in months’ worth of sales in the inventory at current sales levels (red line in **Figure 2.2**), now down to 6.3 months in Q1 2012 from a high point of 11.3 months in Q3 2010. This measure was highly volatile in 2009 and 2010 as federal incentive

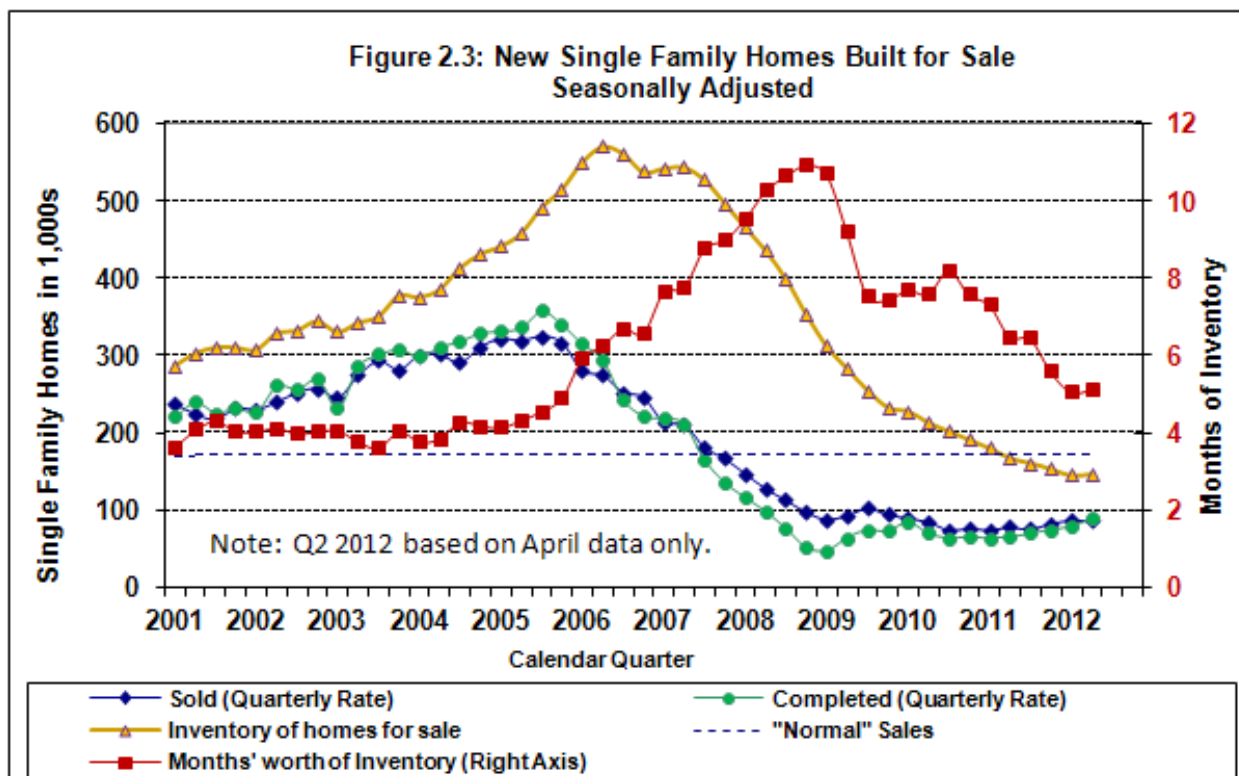
² Includes single-family homes, townhomes, condominiums and co-ops.



programs for home buyers came and went, but it has been falling through 2011 and into 2012. In more normal times it is in the four to five month range.

New Home Sales. New home sales continue to be at historically low levels. Last year (2011) was the lowest year on record with only 307,000 new homes sold (76,000 quarterly rate), compared with the long-term (1963-2010) “normal” annual rate of 680,000 per year (170,000 quarterly rate). Squinting closely at **Figure 2.3**, one can see that new home sales probably bottomed out in mid-2010 and they are up slightly in the first part of 2012.

As shown in **Figure 2.3**, new home sales and new home construction move together, as expected. Even with the low level of new home sales (blue line on graph), new house construction (green line) has been even lower since early 2007. Since the number of new homes sold has exceeded the number of new homes built throughout the last five years, the inventory of newly built homes for sale has been declining over the same period. New home inventory is now down to its lowest level in 10 years. At a high in July 2006, there were 572,000 new single family homes available to purchase in the United States. At the end of March 2012, there were only 144,000 available, a new record low (see **Figure 2.3**). The decline in the inventory of new homes is now slowing down and appears to be near its bottom. April 2012 is the first month in five years in which more new homes were completed than were sold.

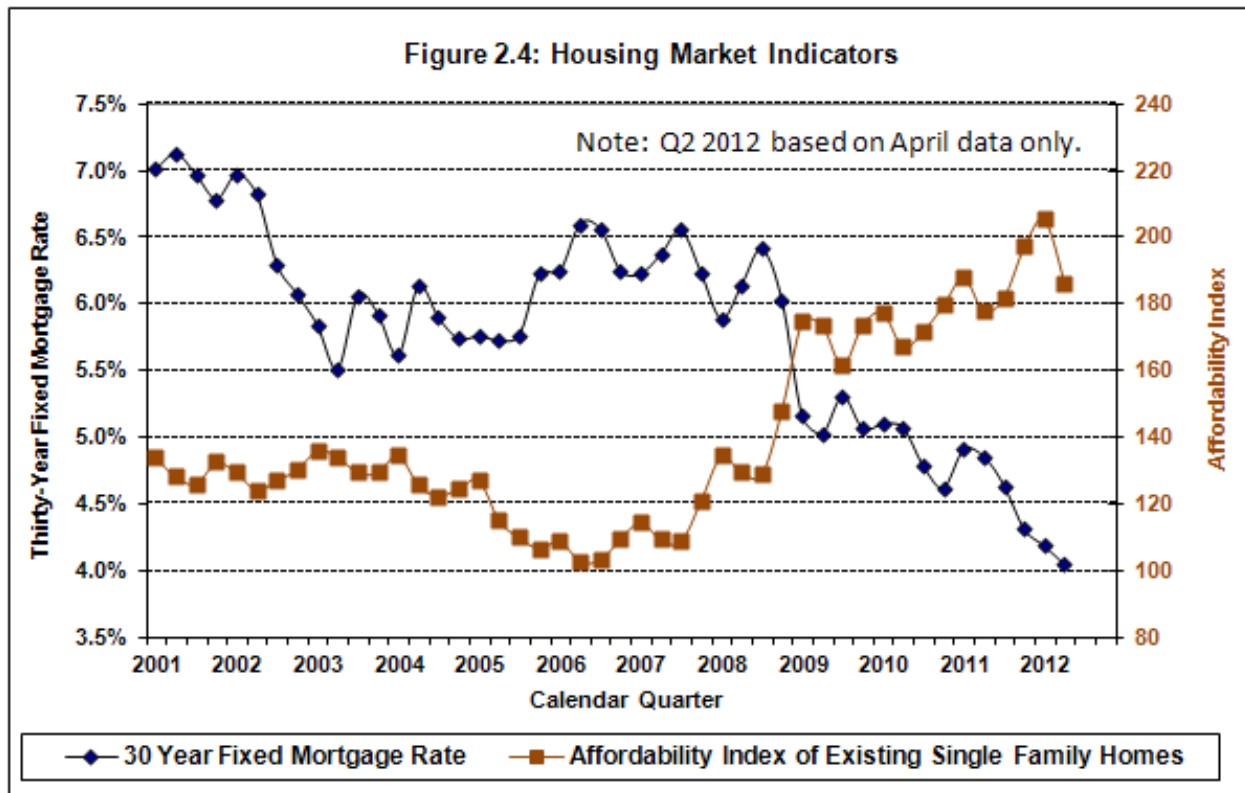


In the first quarter of 2012, as shown in **Figure 2.3**, the months' worth of inventory of new homes for sale (at current sales rates) has worked its way down to 5.1 months from a monthly high of 12.2 months in January 2009 (the quarterly high was 10.9 months in Q4 2008). This is another good development as the measure is now approaching the pre-2006 "normal" of about four months' worth of inventory of new homes. New home completions and sales will not increase significantly until the excess supply of existing homes, including those in the foreclosure pipeline, is absorbed. Reducing the inventory (supply) is a necessary part of restoring the U.S. housing market because it will contribute to the need for new houses to be built.

Some people think housing [annual new home sales] will recover rapidly to the 1.2+ million rate we saw in 2004 and 2005. I think that is incorrect for two reasons. First, I think the recovery will be sluggish - 2012 will probably be the third worst year ever. Second, the 1.2 million in annual sales was due to an increasing homeownership rate and speculative buying. With a stable homeownership rate, and little speculative buying, sales will probably only rise to around 800 thousand at full recovery.

*Bill McBride, Calculated Risk
May 23, 2012*

Affordability. Housing affordability conditions for all buyers reached a milestone in the first quarter of 2012, according to the National Association of Realtors (NAR). NAR's composite Housing Affordability Index rose to a record high of 205.4 in Q1 2012 (see **Figure 2.4**), based on the relationship between the median home price, the median family income, and the average mortgage interest rate. The higher the index is, the greater the household purchasing power.



The Affordability Index is the ratio of median family income to the income required to qualify for the median-priced existing single-family home. In April 2012, the affordability index was \$ 61,014/\$ 32,784 or 186.1.

This is the first time the index broke the 200 mark since recordkeeping began in 1970. In April, the affordability index fell sharply to 186.1 (see **Figure 2.4**), driven by an eight percent increase in the median priced existing single family home (there is speculation that the mix of homes sold had relatively more higher price homes during the last month, driving up the value of the median priced home sold).

U.S. 30-year fixed mortgage loan rates³ remain at historically low levels (see **Figure 2.4**), dropping to yet another new low of 3.96 percent in March before rising to 4.04 percent in April. The 30-year fixed mortgage rate has been below 5 percent for 22 consecutive months.

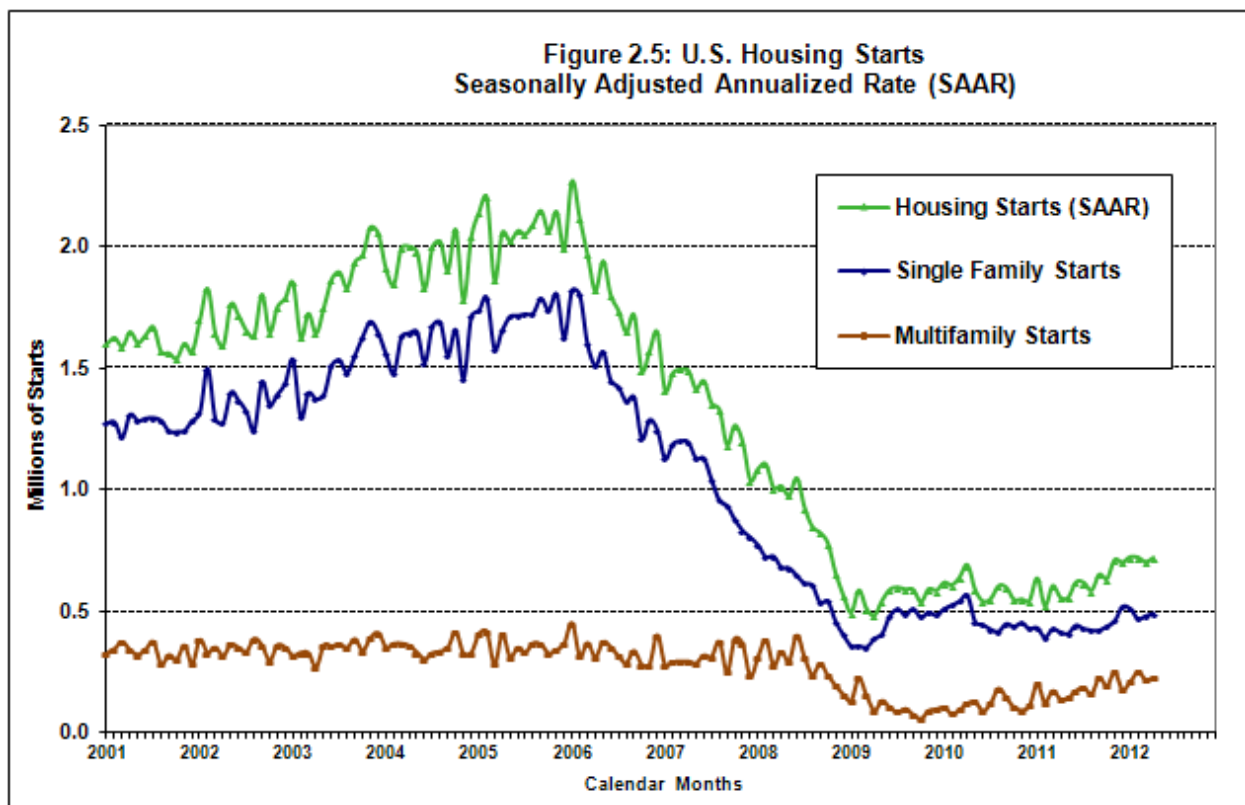
The family income required to qualify for a mortgage on the \$178,000 median-priced existing single family home in the United States at April's rate of 4.04 percent is only \$32,784 per year. This compares with an average qualifying income of \$45,984 in 2008 and \$52,992 in 2007 to purchase the median priced existing single family home in those years. While the qualifying income is now much lower, median family income was \$61,014 in April, similar to the average of \$63,366 in 2008 and \$61,173 in 2007.

Very affordable housing has had little impact on housing demand and home sales. Lance Roberts, CEO and Chief Economist, Streetwork Advisors, says "it is important to remember that

³ The data series cited here is the national average effective rate on closed fixed-rate 30-year conventional home mortgage loans by all major lenders as reported by the Federal Housing Finance Agency.

the housing market is driven by those that are actively seeking to buy a home versus those with a 'For Sale' sign in the front yard and, with one in four homeowners underwater in their mortgage, employment dragging, and incomes weak and outlooks poor, the swarm of demand necessary to create a real 'recovery' in housing is going to be difficult". In addition, banks have severely tightened mortgage loan requirements (such as requiring high down payments and excellent credit ratings) and potential homebuyers are hesitant to buy if they think that prices may still be going down.

Housing Starts. Housing starts in the United States are finally picking up, after moving more or less sideways at a historic low level for the last three years (see **Figure 2.5**). In April 2009, they fell to 478,000 (seasonally adjusted annual rate), the all time record low month since the Census Bureau began tracking housing starts in 1959. In the last six months (November 2011 through April 2012), new housing starts have been around 700,000 (SAAR), a three-year high (see green line on **Figure 2.5**), and many economists are reading this as the start of the recovery in the housing market.



The improvement first came in multifamily starts (brown line). In 2011 there were 177,000 multifamily unit starts compared with 114,000 the year before, a 55 percent increase. In the first four months of 2012, multifamily starts are at 225,000 on an annualized basis. Single family starts (blue line) fell in 2011, down to 434,000 (SAAR) from 471,000 the year before. The annualized rate of single family starts is back up to 489,000 for the first four months of 2012. The upward trends are apparent in **Figure 2.5**.

One favorable indicator is that home builder confidence, which like housing starts had been moving sideways at a very depressed level for several years, has been moving up in 2012. The National Association of Home Builders (NAHB) reports its housing market index (HMI) increased to 29 in June, its highest level since May 2007. The HMI averaged 15 over the year for 2009 and averaged 16 over the year for 2008, 2010, and 2011. Any number under 50 indicates that more home builders view sales conditions as poor than good. So while their confidence is still low, they are becoming less pessimistic.

Housing Shadow Inventory. The inventories of existing and new homes discussed above are made up of those housing units which are currently listed for sale (“on the market”). During the Great Recession, attention has also been on the “shadow inventory”—housing units not currently on the market, but expected to be listed in the next few years.

Depending on one’s definition, the shadow inventory may include:

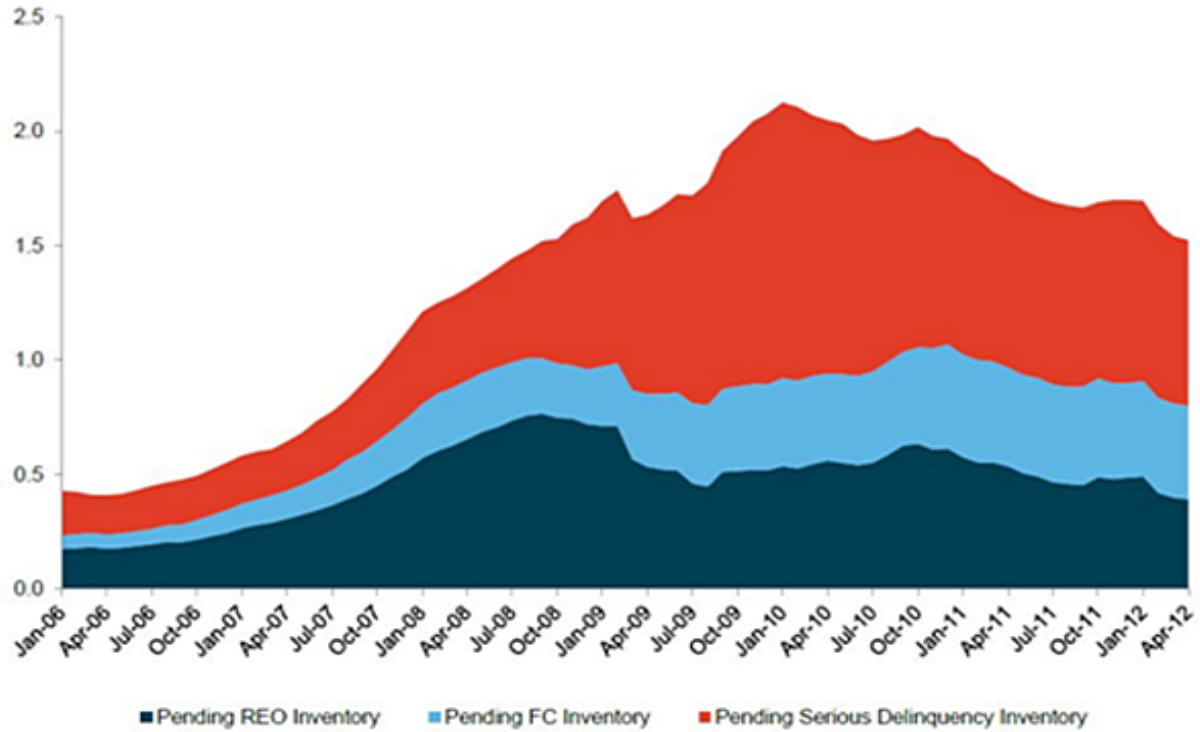
- Bank-owned properties (REO, or “real estate owned”)
- Properties in the process of foreclosure
- Properties with seriously delinquent mortgages of over 90+ days
- Properties with less seriously delinquent mortgages which will become seriously delinquent
- Condos that were converted to apartments and which will be converted back in the next few years
- Investor owned rental properties
- Homes that owners want to sell but are waiting for a better market

CoreLogic has been tracking the shadow inventory, which by its definition includes the first three groups listed above. As measured by CoreLogic, the shadow inventory has declined from its peak of 2.1 million housing units in January 2010 to 1.8 million units in April 2011 and further down to 1.5 million units in April 2012 (see **Figure 2.6**).

A large shadow inventory leads to a large number of distressed sales (including short sales) and therefore pushes housing prices down. The decline in the shadow inventory is a positive development because it removes some of the downward pressure on house prices. Housing prices need to stop falling before there can be a significant recovery in the housing market.

Figure 2.6: CoreLogic Housing Shadow Inventory

Count in Millions, Not Seasonally Adjusted



Source: CoreLogic

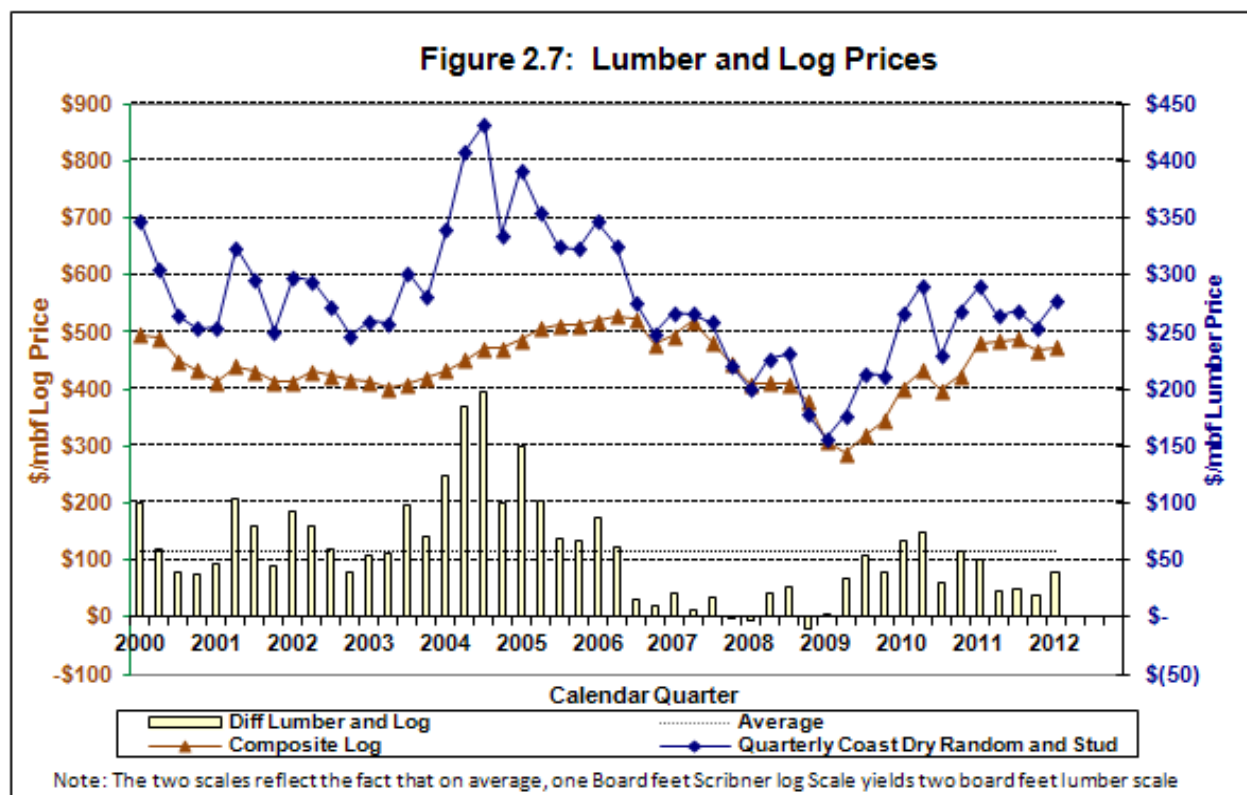
Lumber, log, and timber stumpage prices

Lumber Production and Capacity Utilization. In 2004, when lumber prices were at a high peak, mills in the U.S. West (comprised of the Coast, Inland, and California Redwood timber areas) produced 18.8 billion board feet (bbf) of softwood lumber while operating at a historically strong 93 percent of their plant capacity. By 2009, lumber production in the West had fallen to 10.4 bbf, using only 55 percent of the capacity, which itself was reduced by six percent. In 2010 and 2011, the respective numbers for lumber production in the West were up to 11.3 bbf and 11.6 bbf, capacity was virtually unchanged, and capacity utilization was up to 59 and 61 percent.

Total U.S. lumber mill capacity utilization was at 62 percent in 2010 and 66 percent in 2011; RISI is projecting it to improve to 66 and 71 percent in 2012 and 2013 and estimates that the demand/mill capacity ratio in the North American softwood lumber market needs to be above 80 percent before the lumber sector can achieve a sustained recovery with higher prices. RISI is projecting that the ratio will rise above 80 percent again in 2014.

The weak lumber market in recent years has led to curtailments and closures at U.S. and Canadian lumber mills. North American lumber mills have ample idle capacity to ramp up production when market conditions improve.

Lumber and Log Prices. Figures 2.7 and 2.8 show lumber and log prices in Washington and their relationship since 2000. Log prices are the prices paid for logs delivered to the mill.



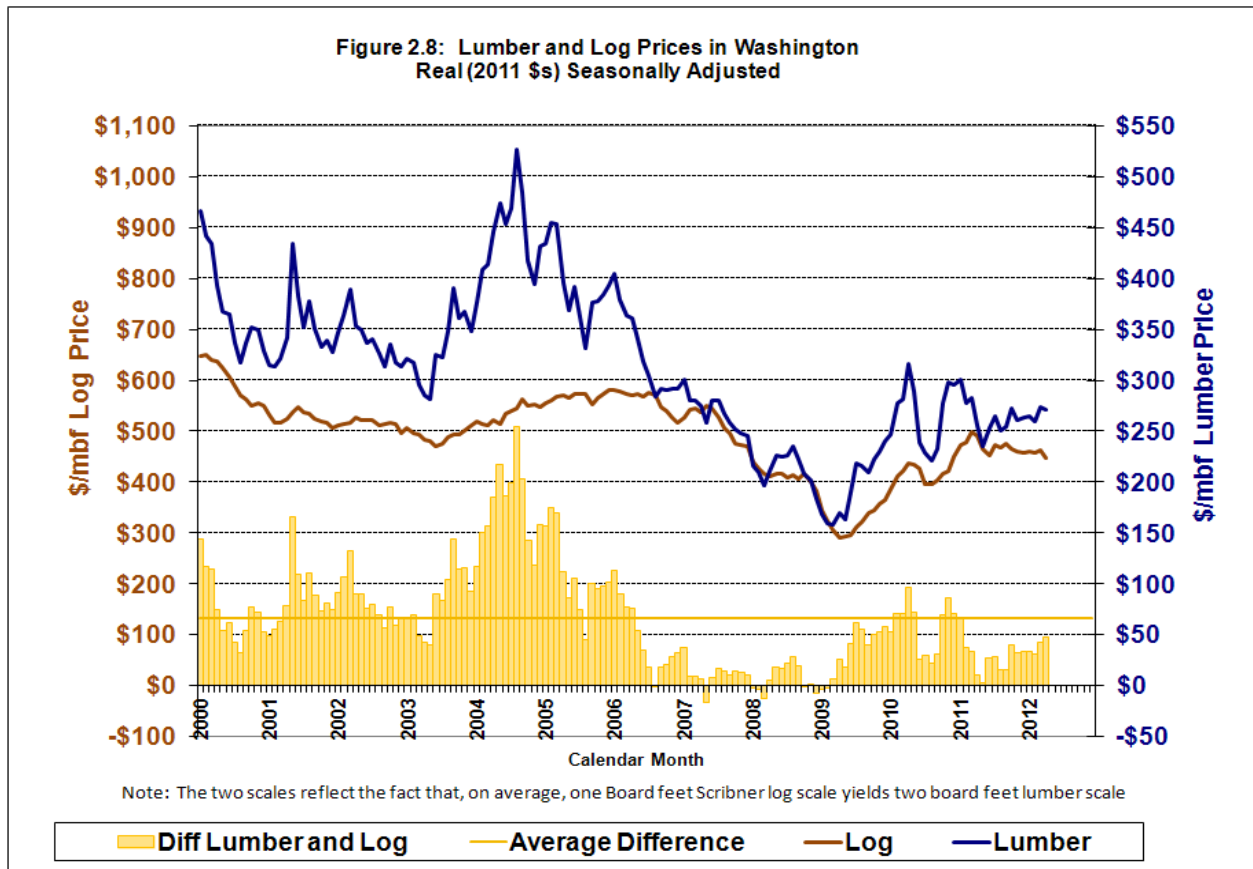
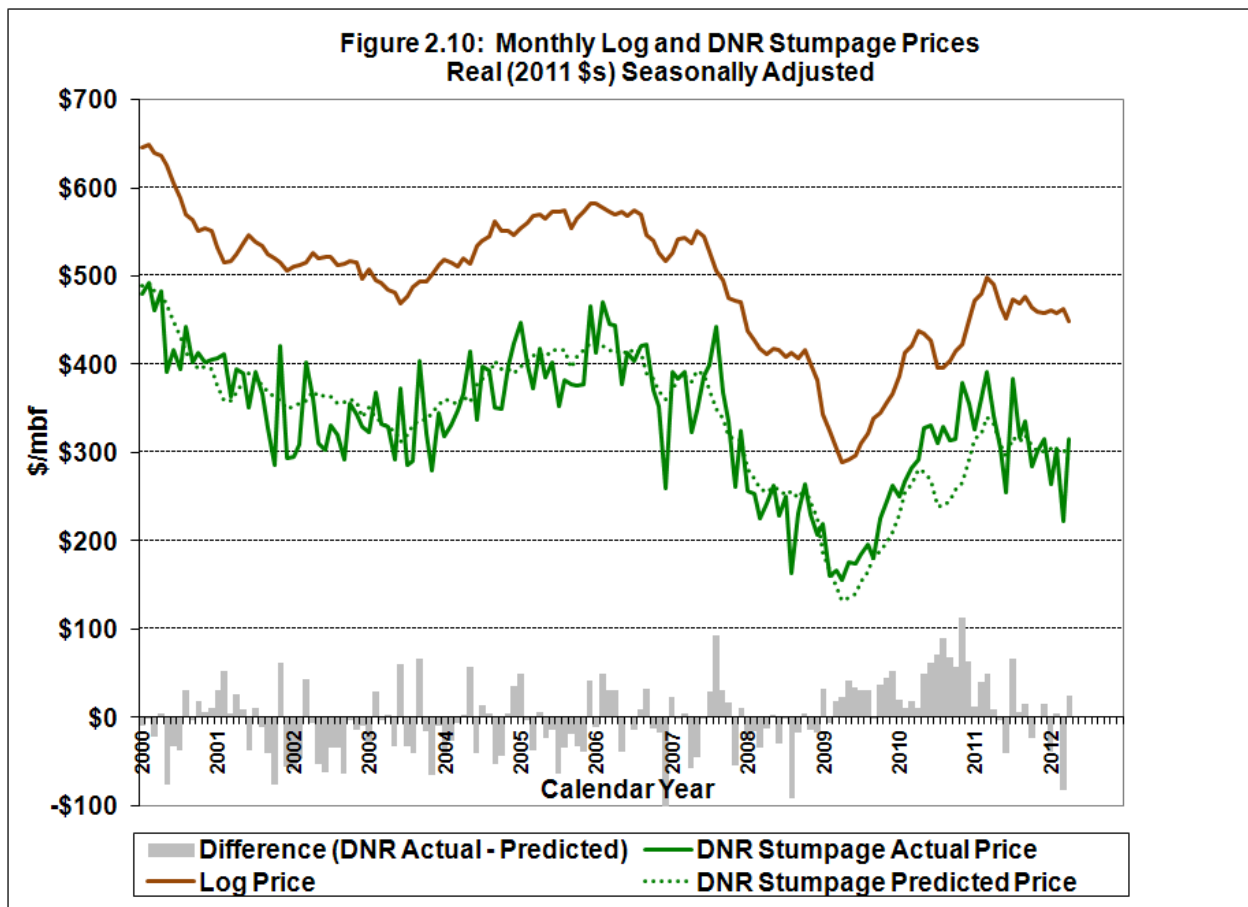
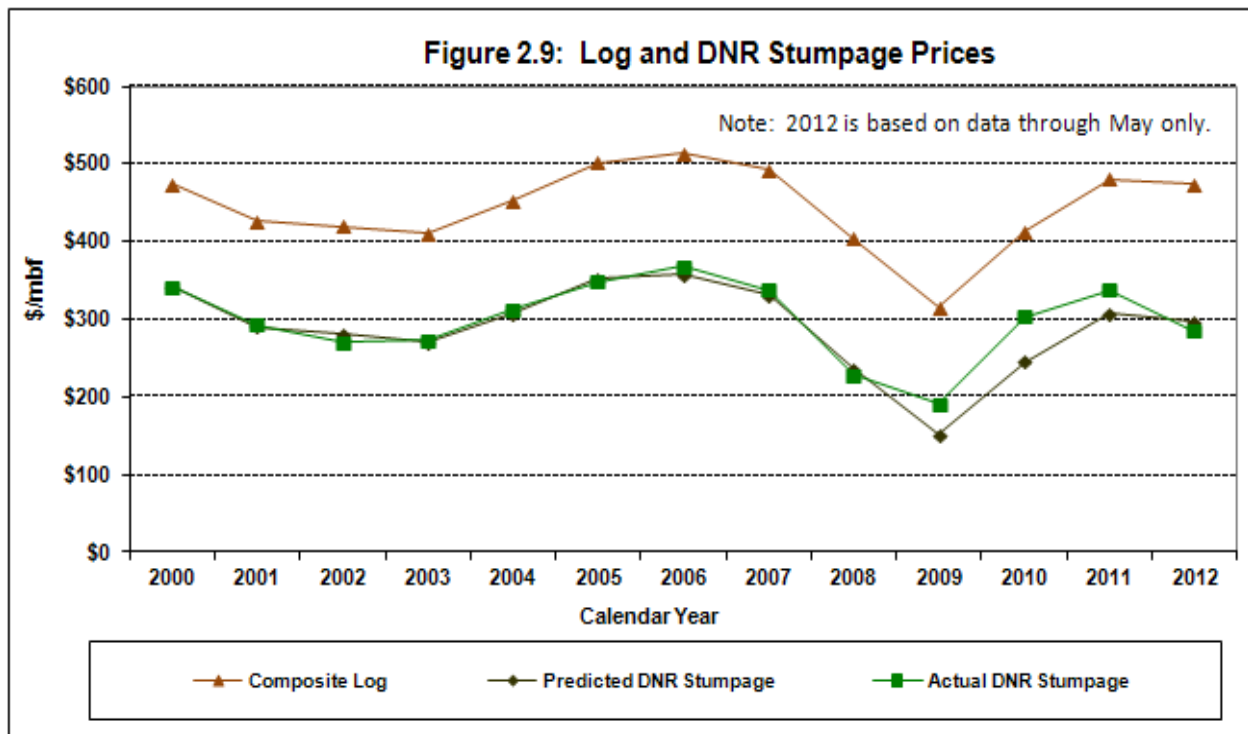


Figure 2.7 shows quarterly nominal prices and **Figure 2.8** shows monthly real seasonally adjusted prices. Both lumber and log prices have significantly improved from their extreme lows in 2009. The lumber price (real SA) bottomed at \$159/mbf in February and March of 2009 and rose to hit highs of \$316/mbf in April 2010 and \$301/mbf in January 2011 (see **Figure 2.8**). In April 2012, the lumber price stood at \$272/mbf. Composite log prices are less volatile than lumber prices (see **Figure 2.8**). They have risen from a low of \$290/mbf (real SA) in April 2009 to a high of \$498/mbf in March 2011. The April 2012 price for logs is at \$448/mbf.

Log and DNR Stumpage Prices. **Figure 2.9** shows prices for logs, predicted DNR stumpage, and actual DNR stumpage on an annual basis since 2000. The “composite log price” represents prices for logs delivered to mills weighted by the average geographic location, species, and grade composition of timber typically sold by DNR. After the low in 2009, average annual log and stumpage prices improved in both 2010 and 2011. In 2012 through May, as shown in **Figure 2.9**, log prices at \$475/mbf are slightly down from \$481 for all of 2011; log prices at \$285/mbf are down more sharply from 2011’s \$338/mbf.

Figure 2.10 shows the same relationship but on a monthly basis with seasonal adjustment and in real 2011 dollars. The bars at the bottom of the graph show by how much actual DNR stumpage prices are above those expected given log prices. **Figure 2.10** shows the upturn in log and DNR stumpage prices since the extreme low point in April 2009. Even with the large volatility in DNR stumpage prices from month to month, there is a downward trend apparent since March 2011, which had the highest price since August 2007.





Part 3. DNR's Revenue Forecast

This Revenue Forecast includes Department revenues from timber sales on trust uplands, leases on trust uplands, and leases on aquatic lands. It also forecasts revenues to individual funds, including DNR management funds, beneficiary current funds, and beneficiary permanent funds. Some caveats about the uncertainty of forecasting Department revenues are summarized near the end of this section.

Timber revenues

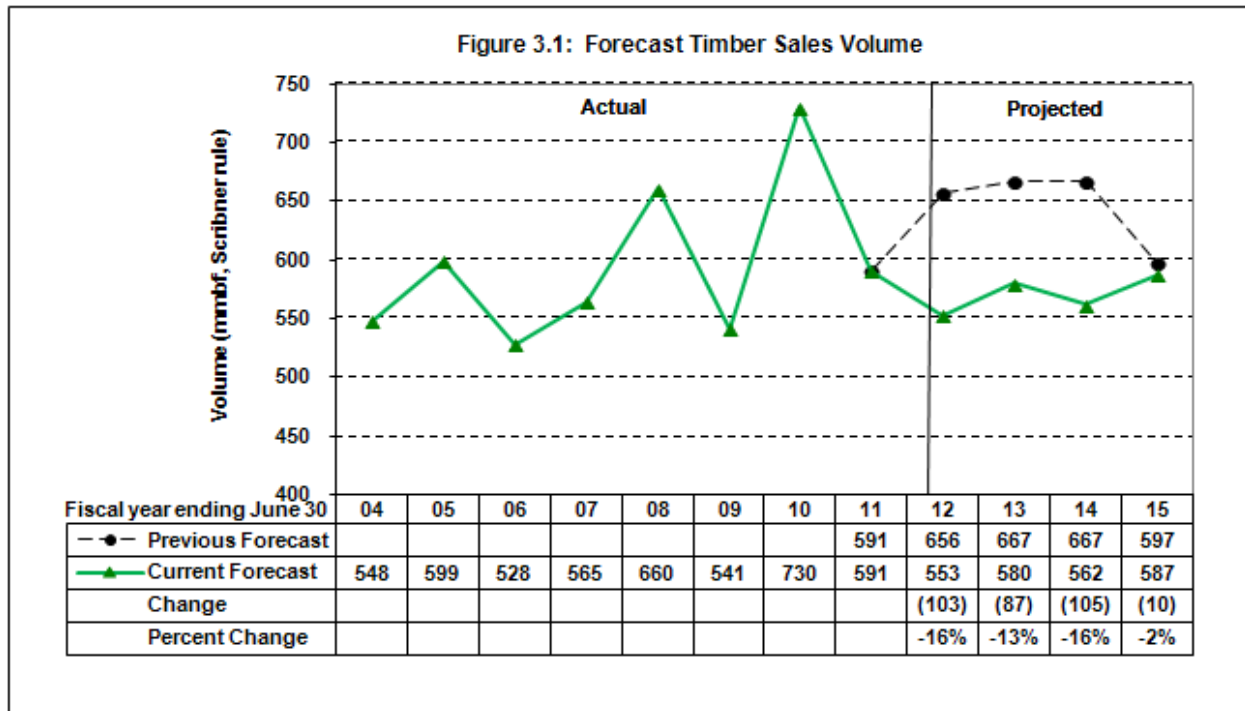
The Washington State Department of Natural Resources (DNR) sells timber through contracts. The Department determines the total volume to be offered for sale each month and the minimum bid for each timber sale. The sale is awarded to the highest bidder and the average sales price (\$/mbf) is set at the time of auction. DNR collects a 10 percent initial deposit at the time of sale and holds it until the sale is completed. Revenues are collected at the time of harvest (removal). The initial deposit is credited as the last 10 percent of timber is harvested.

Contracts for DNR timber sales sold so far in FY 2012 varied in duration from three months to three years, with an average (weighted by volume) of about 21.3 months. The purchaser determines the actual timing of harvest within the terms of the contract. As a result, timber revenues to beneficiaries and DNR management funds lag current market conditions. Currently, that lag is about 13 months.

Timber that is sold but not yet harvested is referred to as “volume under contract” or “inventory”. Timber volume is added to the inventory when it is sold and placed under contract and it is removed from the inventory as the timber is harvested.

Timber Sales Volume. With FY 2012 nearing its end, DNR has sold 484 mbf in timber sales through May. Projected timber sales volume for the fiscal year is revised downward to 553 mmbf from 656 mmbf (see **Figure 3.1**) since actual volume sold has not matched the earlier target.

Previous Forecasts have tied projected timber sales volumes through FY 2014 to the decadal sustainable harvest level for western Washington established by the Board of Natural Resources in 2004. To attain the Westside sustainable harvest timber sales target level of 5,500 mmbf for the FY 2005-2014 decade, the 103 mmbf shortfall in the FY 2012 projected volume would need to be added to FY 2013 and 2014, the last two years of the current sustainable harvest decade.



This would raise the previous annual FY 2013 and 2014 timber sales target levels from 667 mmbf to 719 mmbf.

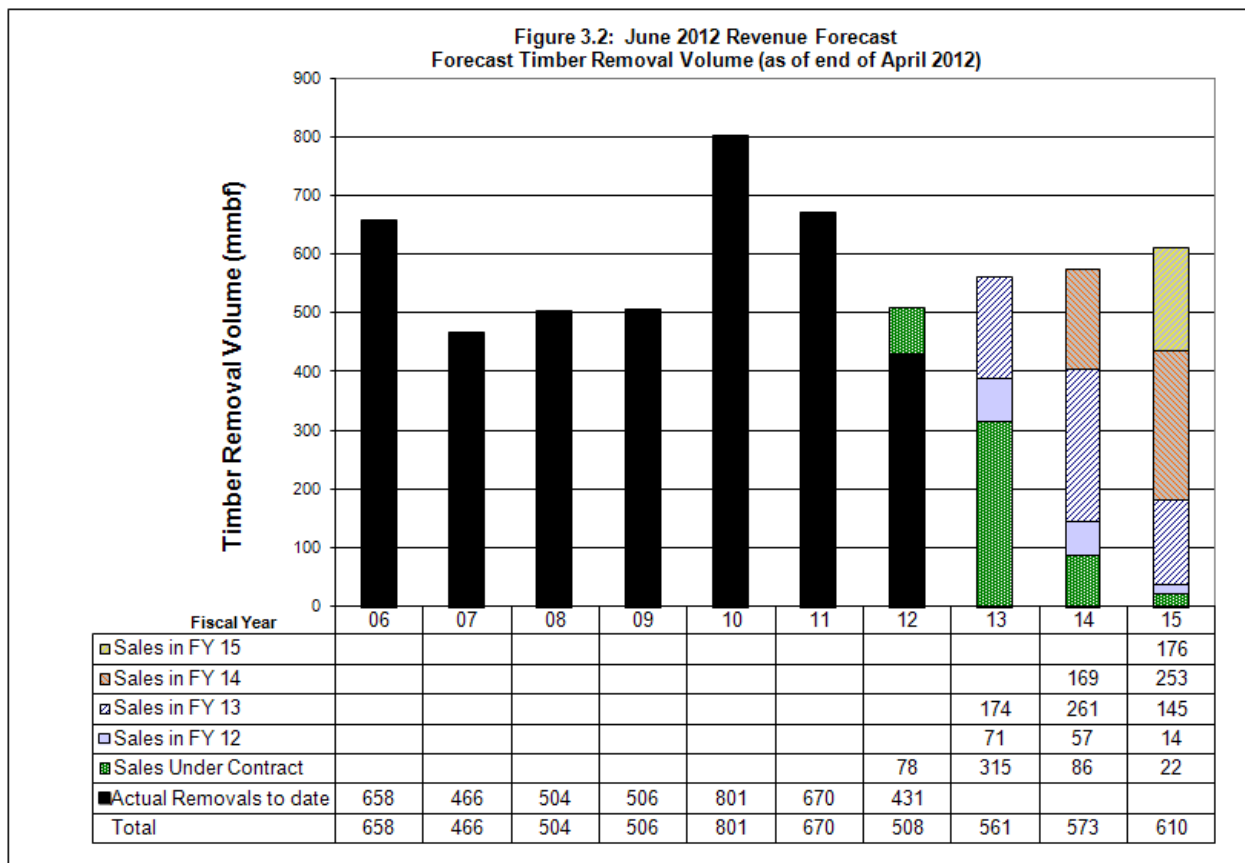
Instead, this Forecast discontinues the assumption that the decadal sustainable harvest target will be met because the level of FY 2012 sales along with planned timber sales volumes in FYs 2013 and 2014 strongly indicate that this condition is no longer realistic. Accordingly, the previous FY 2013 and 2014 timber sales volume target levels of 667 mmbf annually are lowered to 580 and 562 mmbf (see **Figure 3.1**). If actual sales results follow these projections, the shortfall on the 5,500 mmbf decadal target for western Washington timber sales would be about 275 mmbf. The revised timber sales projections for FYs 2013 and 2014 reflect that it is too late in the decade to make up for shortfalls below the 550 mmbf annual Westside sales target that occurred in six of the first eight years of the decade.

Timber sales volume for FY 2015, which is the first year of the next sustainable harvest decade (FY 2015 through FY 2024) for western Washington, is reduced by 10 mmbf to 587 mmbf (see **Figure 3.1**), reflecting a lower projected level of timber sales in eastern Washington. Until next decade's new western Washington sustainable harvest level is determined, the Forecast will use the Department's estimated annual sustainable harvest level of 537 mmbf for the next decade. Combined with the new projected eastern Washington timber sales of 50 mmbf for FY 2015, we arrive at a projected timber sales volume of 587 mmbf for FY 2015.

Compared with previous Forecasts, the risk of not realizing projected timber sales volumes is greatly reduced by doing away with the assumption that timber sales volumes through FY 2014 would need to be high enough to match the decadal sustainable harvest level. Even so, there is a risk of falling short of the revised projected timber sales volumes due to prospective environmental and policy issues.

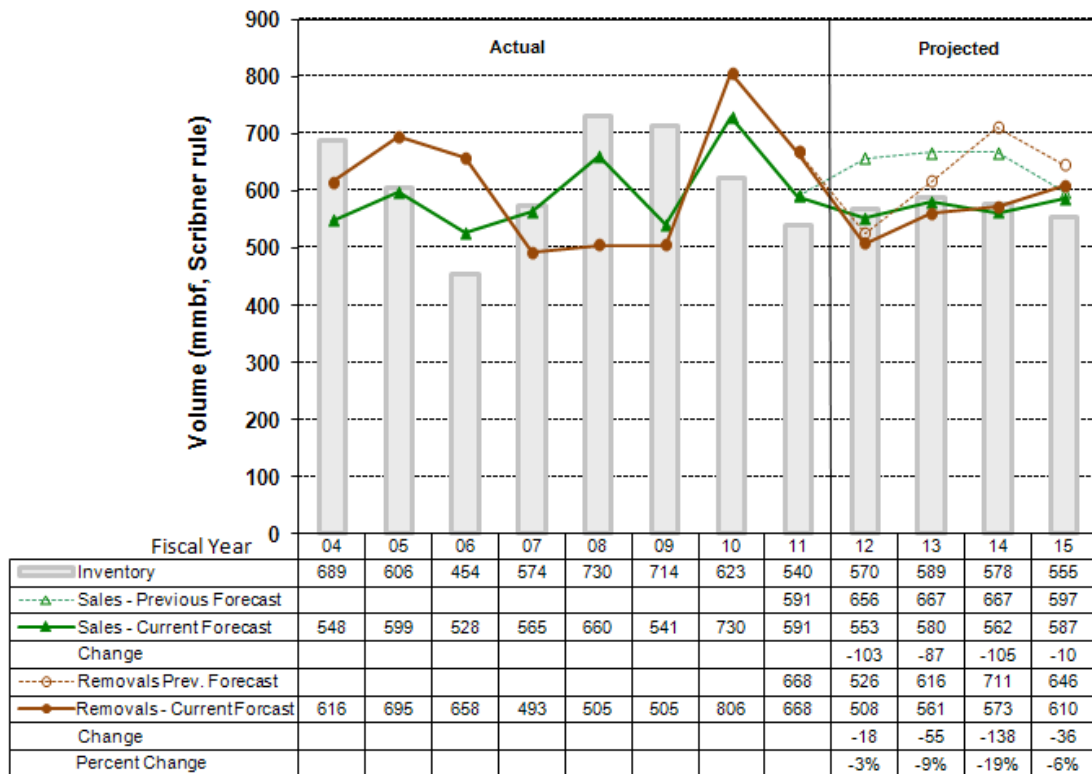
Timber Removal Volume. At the end of April, the Department had 501 mmbf of timber valued at \$152.6 million under sales contract. This is a 14 percent increase in the volume under contract from the 437 mmbf at the end of December (and referenced in the February Forecast) and it is a 10 percent increase in the value under contract from \$138.8 million.

For each Forecast, we survey DNR timber sale purchasers to determine their planned timing of removals of the timber volume they have under contract at the time of the survey. This Forecast's survey, conducted in the first half of May, indicates that purchasers plan to harvest 78 mmbf, 16 percent, of the volume remaining under contract this fiscal year (FY 2012) and 315 mmbf (63 percent), 86 mmbf (17 percent) and 22 mmbf (4 percent) of the existing inventory in FYs 2013, 2014, and 2015 respectively (see **Figure 3.2** for detail). The results of the survey indicate that purchasers plan to defer harvests somewhat, with sales volumes higher than removal volumes in FYs 2012 and 2013 and removals exceeding sales in FYs 2014 and 2015 (see **Figure 3.3**).



In FY 2012 through April, timber sale purchasers removed 431 mmbf (see **Figure 3.2**). Together with the expected removals of 78 mmbf from volume under contract at the end of April (as indicated by the purchasers' survey), this brings the forecast of total timber removals for FY 2012 to 508 mmbf—an 18 mmbf, or three percent, decrease from the 526 mmbf projected in the February Forecast (see **Figures 3.2 and 3.3**).

Figure 3.3: Timber Volume - Sales and Removal



The level and timing of projected timber removal volumes are changed in this forecast as a result of the projected sales volumes being reduced in combination with the purchasers' plans to delay some of their harvests. As a result, projected timber removal volumes for the current biennium, 2011-2013, are reduced by 73 mmbf, or 6 percent, from the February Forecast. Forecast volumes for the 2013-2015 Biennium are reduced by 174 mmbf, or 13 percent (see **Figure 3.3**).

At the end of FY 2011, there was about 11.0 months' worth of timber sales volume under contract. Since purchasers plan to defer harvest of some of the existing timber inventory under contract, we expect the inventory to increase to about 12.8 months' worth at the end of FY 2012 and to be about 12.4 months worth at the end of FY 2013.

Timber Sales Prices. Composite log prices (weighted by species) may be used to predict actual stumpage prices for DNR timber sales (using the formula composite log price minus \$150/mbf for logging costs). The composite projected stumpage price reached a recent high of \$353/mbf in March 2011, the highest level since June 2007 (see **Figure 3.4**). Since then, it has generally fallen and stands at \$332/mbf as of May.

Actual results of monthly DNR timber sales (shown in **Figure 2.10** in seasonally adjusted terms and in real 2011 dollars) are more volatile. In FY 2011, monthly timber sale prices were mostly above \$300/mbf (see **Figure 2.10**) and averaged \$339/mbf weighted by volume (see **Figure 3.5**).

Figure 3.4: DNR Composite Log Prices
And Predicted Stumpage Prices

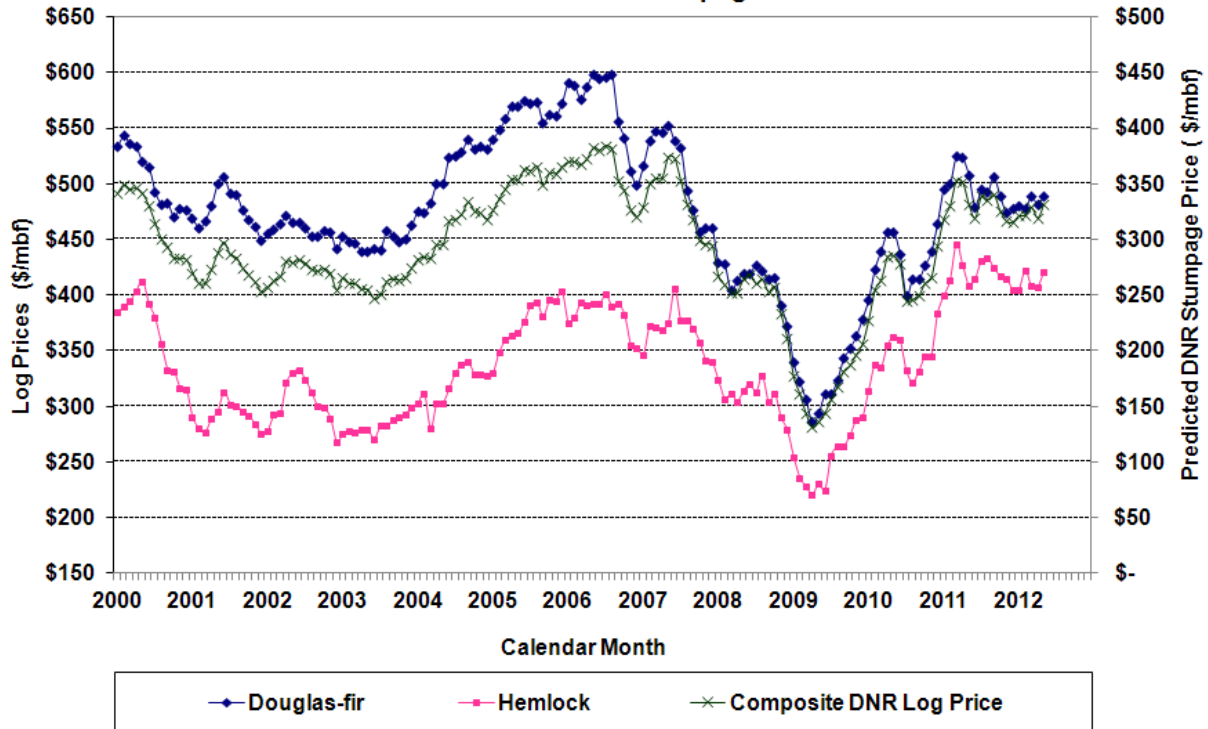
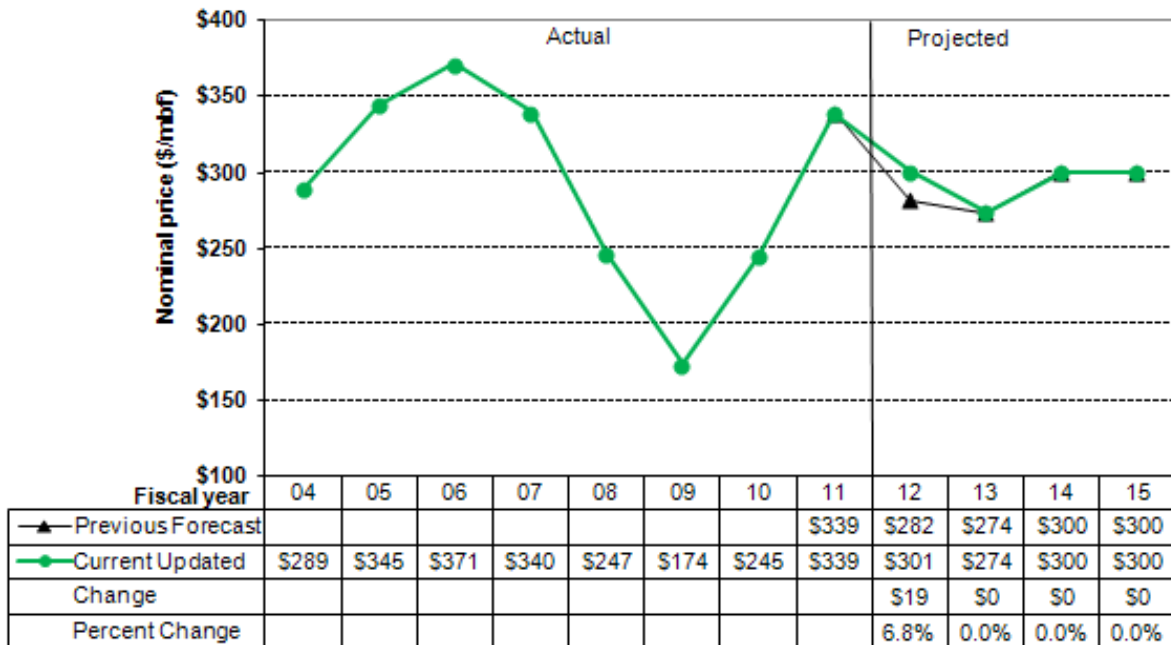


Figure 3.5: Timber Sales Prices - Comparison of Previous Forecast
with Current Forecast



Through the first eleven months of FY 2012, DNR timber sales prices have averaged \$309/mbf, compared with the \$282/mbf price which has been projected for the entire fiscal year in the three previous Forecasts. The FY 2012 average sales price is raised to \$301/mbf in this Forecast (see **Figure 3.5**) based on the higher year-to-date results but tempered by expected June results with a lower than average sales price on higher than average monthly sales volume.

Since a significant recovery in the U.S. housing market is not foreseen over the next several years, we are holding the projected FY 2013 timber sales price at \$274/mbf and the FY 2014 and 2015 prices at \$300/mbf (see **Figure 3.5**). An earlier housing recovery would pull DNR's timber sale prices higher.

For the first time in years, there are reasons to be less pessimistic about the long-term recovery of the U.S. housing market. The timing of a significant recovery in housing construction remains uncertain but when domestic demand for lumber does significantly grow, this will exert upward pressure on stumpage prices. If it happens sooner rather than later, the projected DNR stumpage prices in the later years of the Forecast will prove to have been too low.

Timber Removal Prices. Timber removal prices are a function of timber sales prices and the timing of the timber's removal. They can be thought of as a moving average of previous timber sales prices, weighted by the volume of sold timber removed in each time period. The removal volumes used to calculate the weights are shown in **Figure 3.2**. There is a smoothing out and a lag of timber removal prices compared to timber sales prices. For example, sales prices bottomed out at an average annual \$174/mbf in FY 2009 (see **Figure 3.5**). As shown in **Figure 3.6**, removal prices bottomed out in FY 2010 at \$226/mbf on an annual basis, which was \$52/mbf higher and a year later than the bottom for annual sales prices. Timber removal prices made a rebound in FY 2011 to an average annual price of \$280/mbf, thanks in part to the year-over-year increase in sales prices in FYs 2010 and 2011.

Timber Removal Revenues. **Figure 3.7** shows projected annual timber removal revenues and the average removal price for that fiscal year, broken down by the fiscal year in which the timber was sold ("sales under contract" are already sold as of May 1, 2012). About 85 percent (or \$137.5 million) of the forecast timber harvest revenue this fiscal year (FY 2012) will come from sold timber already harvested to date and another 15 percent (\$27.3 million) will come from previously sold timber sales currently under contract as of the end of April.

In the current 2011-2013 Biennium, projected timber revenues are revised downward to \$323.3 million, a reduction of \$12.9 million, or four percent, from the February Forecast (see **Figure 3.8**). This is attributable to a six percent reduction in projected timber removal volumes as tempered by a 2.5 percent increase in projected removal prices. In the 2013-15 Biennium, forecast timber removal revenues are down by \$47.3 million, or 12 percent, to \$341.8 million as a result of the 13 percent decrease in projected removal volumes and a less than one percent increase in projected removal prices for the biennium.

Figure 3.6: Timber Removal Prices - Comparison of Previous Forecast with Current Forecast

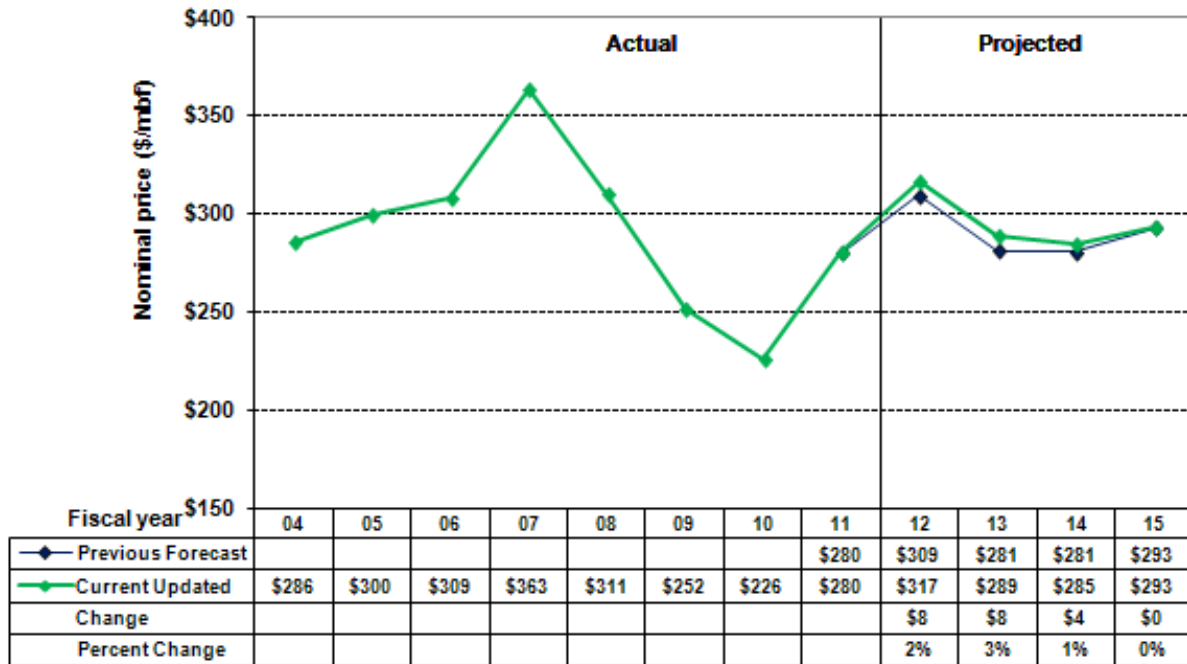


Figure 3.7: June 2012 Revenue Forecast
Forecast Timber Removal Value (as of end of April 2012)

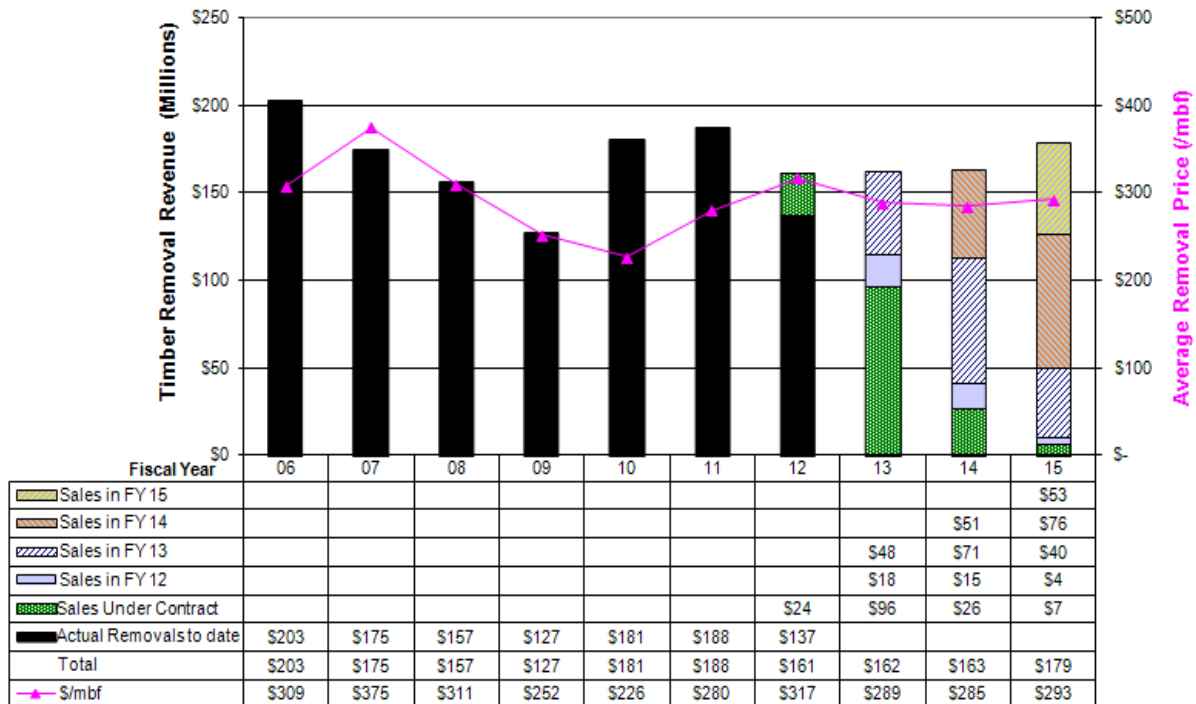
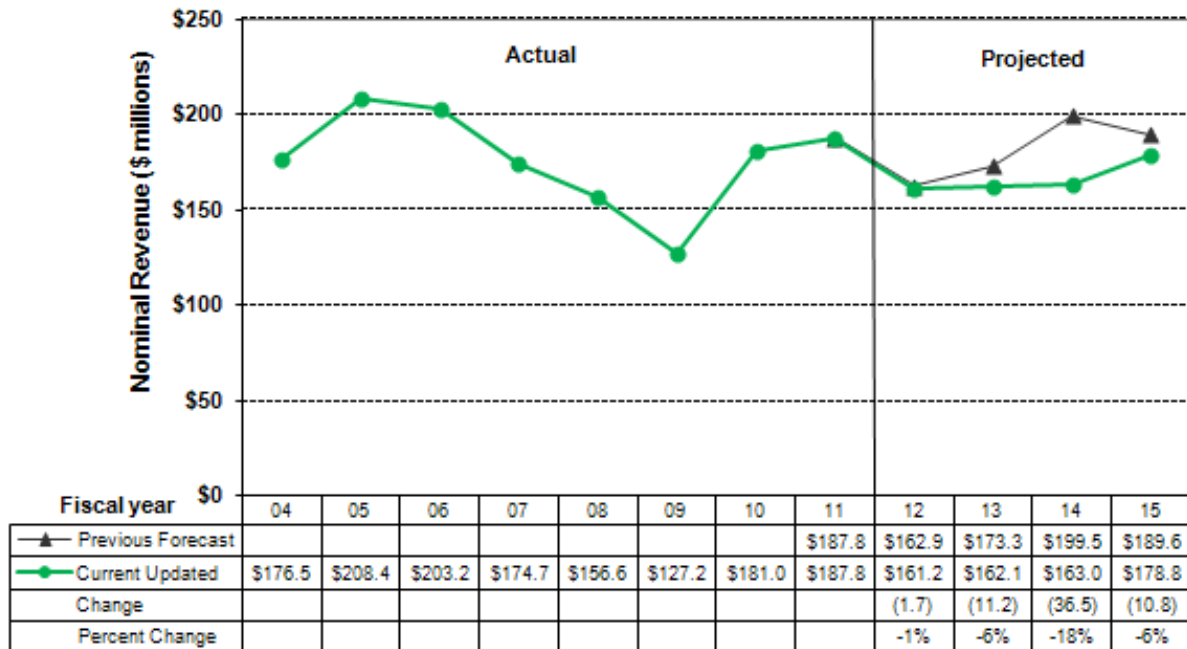


Figure 3.8: Timber Removal Revenues - Comparison of Previous Forecast with Current Forecast, 2012-2015



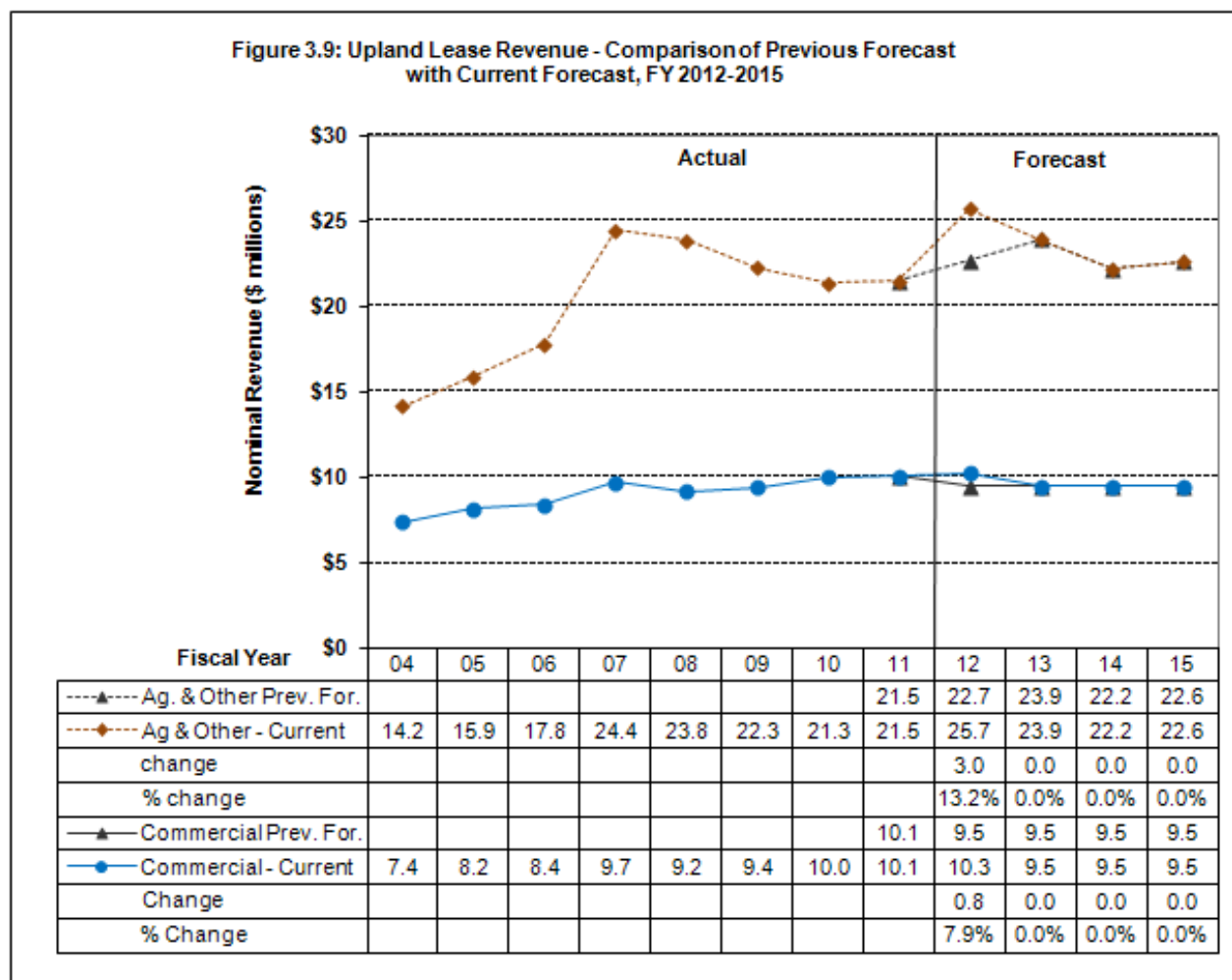
Upland lease revenues

Upland lease revenues are generated primarily from leases and the sale of valuable materials, other than timber, on state trust lands. In the Forecast, upland lease revenues are divided into two categories:

Commercial—Commercial real estate leases.

Agricultural and Other—Agricultural includes dryland cropland, irrigated cropland, and orchard and vineyard leases. “Other” includes grazing, special forest products, special use, communication site, and mineral and hydrocarbon leases, right-of-way easements, and sales of valuable materials other than timber (e.g., rock, sand, and gravel), as well as a few smaller miscellaneous revenue sources.

Commercial. Commercial real estate leases on state trust lands generate a steady source of revenue (see **Figure 3.9**). DNR has been fortunate to be able to maintain a \$10 million level of revenue from commercial leases in the last two fiscal years, FYs 2010 and 2011, even in the face of a difficult economy which has been hard on commercial real estate.



Based on the favorable level of year-to-date revenues, projected commercial lease revenues for the current fiscal year FY 2012 are raised to \$10.25 million from the conservative \$9.5 million previously forecast (see **Figure 3.9**).

This Forecast leaves projected commercial lease income unchanged at \$9.5 million per year for FYs 2013-2015, as originally set in the June 2011 Forecast, because of the slow recovery and continued uncertainty in the commercial real estate market. The upside and downside risks to the future commercial lease revenue projections are deemed to be in balance.

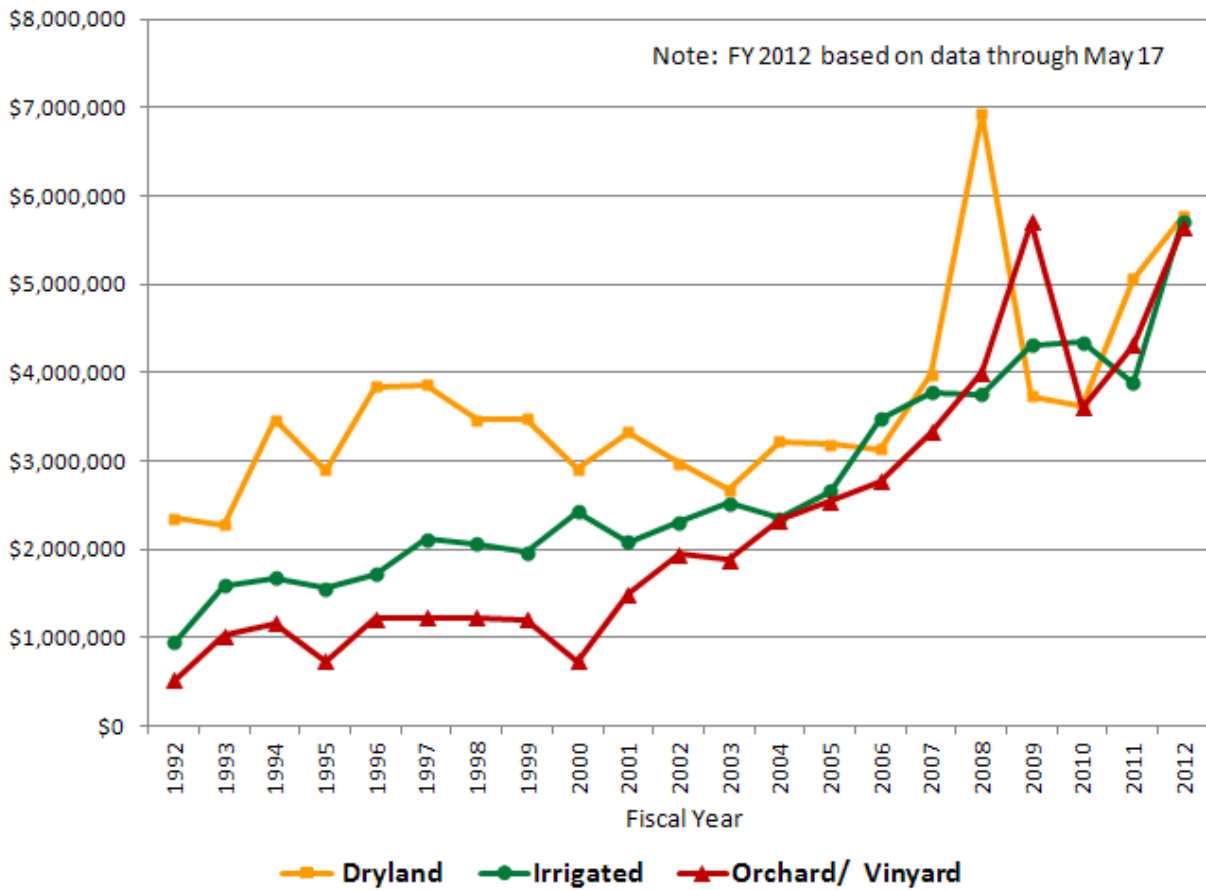
Agricultural and Other. Revenues from agricultural and other (non-commercial) upland leases were around \$21.5 million for both FY 2010 and FY 2011 (see **Figure 3.9**). A more detailed breakdown of these revenues over the last two fiscal years is shown below:

	<u>FY 2010</u>	<u>FY 2011</u>	<u>Percent of FY 2010-11 Total</u>
Agricultural	\$11,589,000	\$13,112,000	57.7
Grazing	664,000	663,000	3.1
Special forest products	585,000	424,000	2.4
Special use	1,760,000	1,818,000	8.4
Communication site	3,988,000	3,962,000	18.6
Right-of-Way	726,000	433,000	2.7
Mineral, oil, and gas	682,000	282,000	2.3
Rock, sand, and gravel	647,000	595,000	2.9
Other ⁴	<u>699,000</u>	<u>181,000</u>	2.1
Total	\$21,340,000	\$21,469,000	

Near-completed FY 2012 will be a record year for revenues from agricultural leases—due to a combination of a by-far record year for irrigated crop lease revenues, a near-record year for orchard and vineyard lease revenues, and the second highest year from dryland crop lease revenue. Note on **Figure 3.9b** how all three agricultural categories had high revenues of around \$5.7 million through mid-May. Only twice before did any one category reach this level of revenue—dryland at \$6.9 million in FY 2008 (due to spiking wheat prices) and orchard and vineyard at \$5.7 million in FY 2009. As a result of the coincidentally high revenues across all three agricultural lease types, the forecast for agricultural and other upland (non-commercial) lease revenues for FY 2012 is increased by \$3.0 million to \$25.7 million (see **Figure 3.9**).

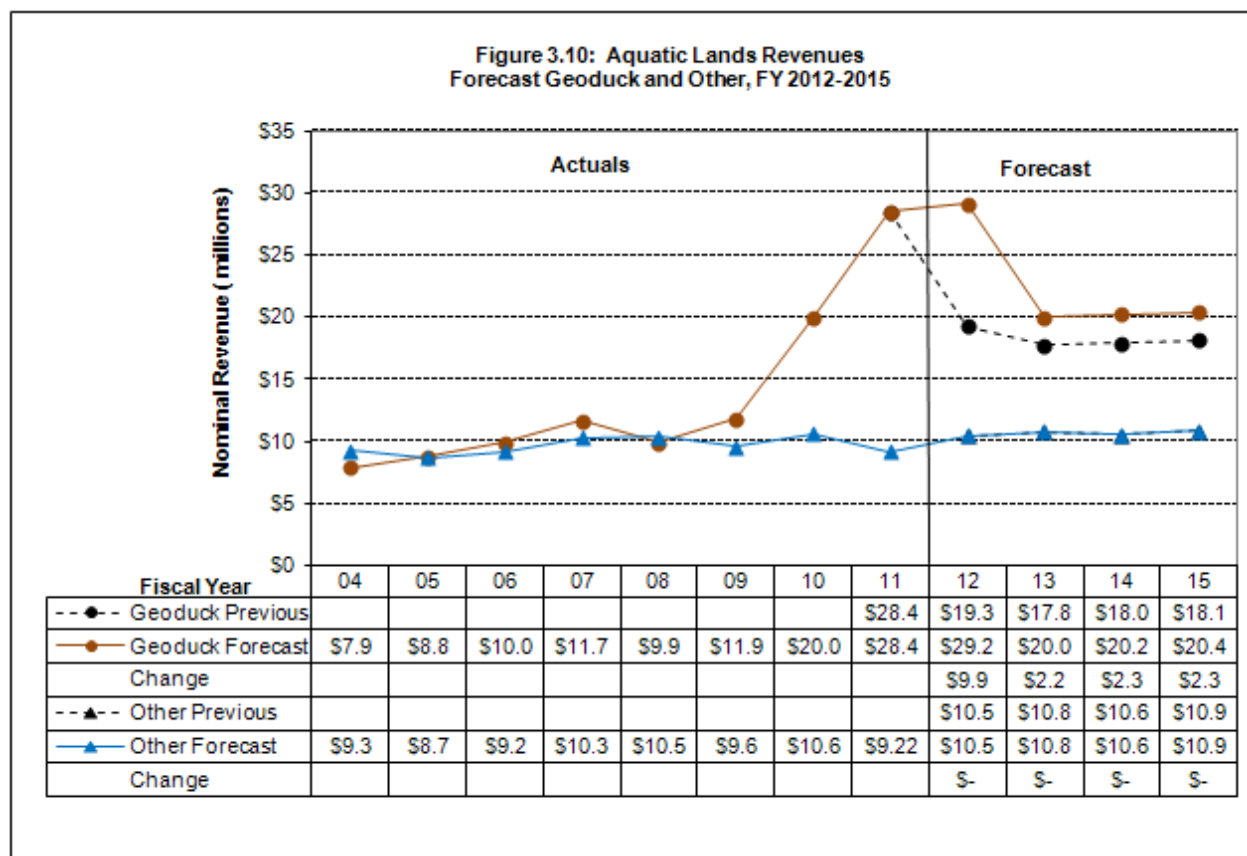
⁴ “Other” is composed of smaller miscellaneous revenue sources including habitat and conservation leases, trespasses, assessment payments, and pass-through power charges.

Figure 3.9a: DNR Agriculture Lease Revenue by Type



Aquatic lands revenues

Geoduck Revenues. At the time of the February 2012 Forecast, the results of the late February geoduck auction were not yet in. Also, at that time it was uncertain whether DNR would hold yet another geoduck auction during the fiscal year, so that potential volume and revenue was not included in the Forecast. The February 29 auction yielded the second-highest average price on record at \$13.61/lb., but on lower volume than forecast. The result is that total FY 2012 revenues are \$1.9 million more than the \$19.3 million projected in the February Forecast, even without an additional auction. Another auction was in fact held before the end of the fiscal year and it returned an additional \$8.0 million, on higher than typical volume at a lower price of \$10.81/lb. Therefore, estimated aquatic lands revenues for FY 2012 are raised by \$9.9 million to reflect the results of the two geoduck auctions held since the last Forecast (see **Figure 3.10**).



Looking forward, the projected unit price for geoducks in FY 2013 is changed to \$9.29/lb., up from \$8.25/lb. in the previous Forecast. The unit geoduck prices for FY 2014 and FY 2015 are raised to \$9.38/lb. and \$9.48/lb. Aquatic lands revenues are increased \$2.2 million, \$2.3 million, and \$2.3 million in FYs 2013, 2014, and 2015 respectively as a result of raising the projected average geoduck auction prices in those years (see **Figure 3.10**).

Geoduck revenue projections are raised to \$49.2 million for the current 2011-2013 Biennium and \$40.6 million for the 2013-2015 Biennium (see **Figure 3.10**). However, there are several downside risks:

-
1. Harvests (and therefore revenues) could be deferred or lost due if geoduck beds are closed due an unpredictable occurrence of the paralytic shellfish poisoning (PSP) toxin.
 2. A slowdown in China's economic growth could lower demand for this luxury consumption item in its predominant end market.
 3. Other large-scale social-political-economic events in China such as the SARS (Severe Acute Respiratory Syndrome) outbreak in 2002-2003 could disrupt the economy and foreign trade and commerce.
 4. Future commercial harvest levels may be reduced due to sustainability issues in light of WDFW surveys of closed south Puget Sound geoduck tracts showing slowed or declining recovery rates in recent years and evidence of active poaching.

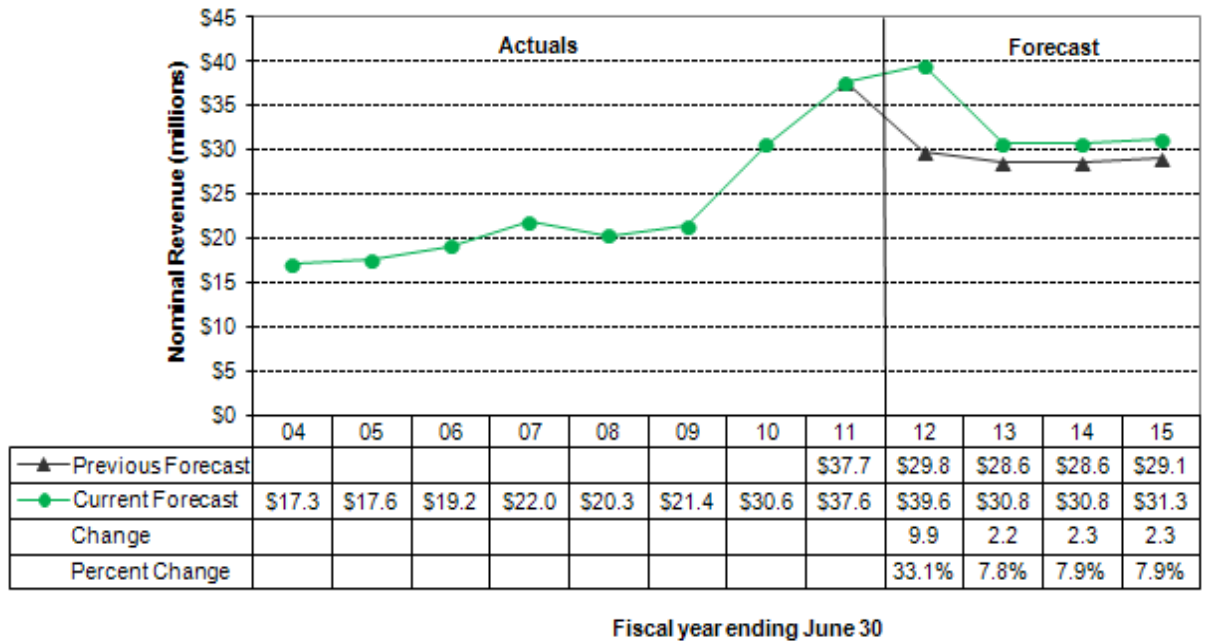
Lease and Other Revenues. DNR manages 2.6 million acres of state-owned aquatic lands for the benefit of the people of Washington. Where appropriate, these aquatic lands may be managed to generate revenue to the state. Besides auctions selling the rights to harvest geoducks, there are several other categories of revenues generated on the state's aquatic lands:

1. Water dependent leases (e.g., marinas and buoys);
2. Non-water dependent leases (e.g., structures related to upland uses);
3. Aquaculture leases (e.g., oyster and salmon "farming");
4. Easements (e.g., powerline rights of way); and
5. Other (e.g., sand and gravel sales and trespass settlements).

There is no change from the previous Forecast in these other (non-geoduck) aquatic lands revenue categories (see **Figure 3.10**). With ten month's worth of revenue data in for FY 2012 to date, there are no big surprises in any of these categories (except for aquaculture leases which had much higher revenues than expected for commercial salmon net pens). We expect that revenue in some of these categories, such as water dependent leases and non-water dependent leases, will continue to be down because of the continued weak economic conditions--this is already built in to the Forecast. The revenue in these other aquatic lands categories is projected to be \$21.3 million in the current 2011-2013 Biennium and \$21.5 million in the 2013-2015 Biennium (see **Figure 3.10**).

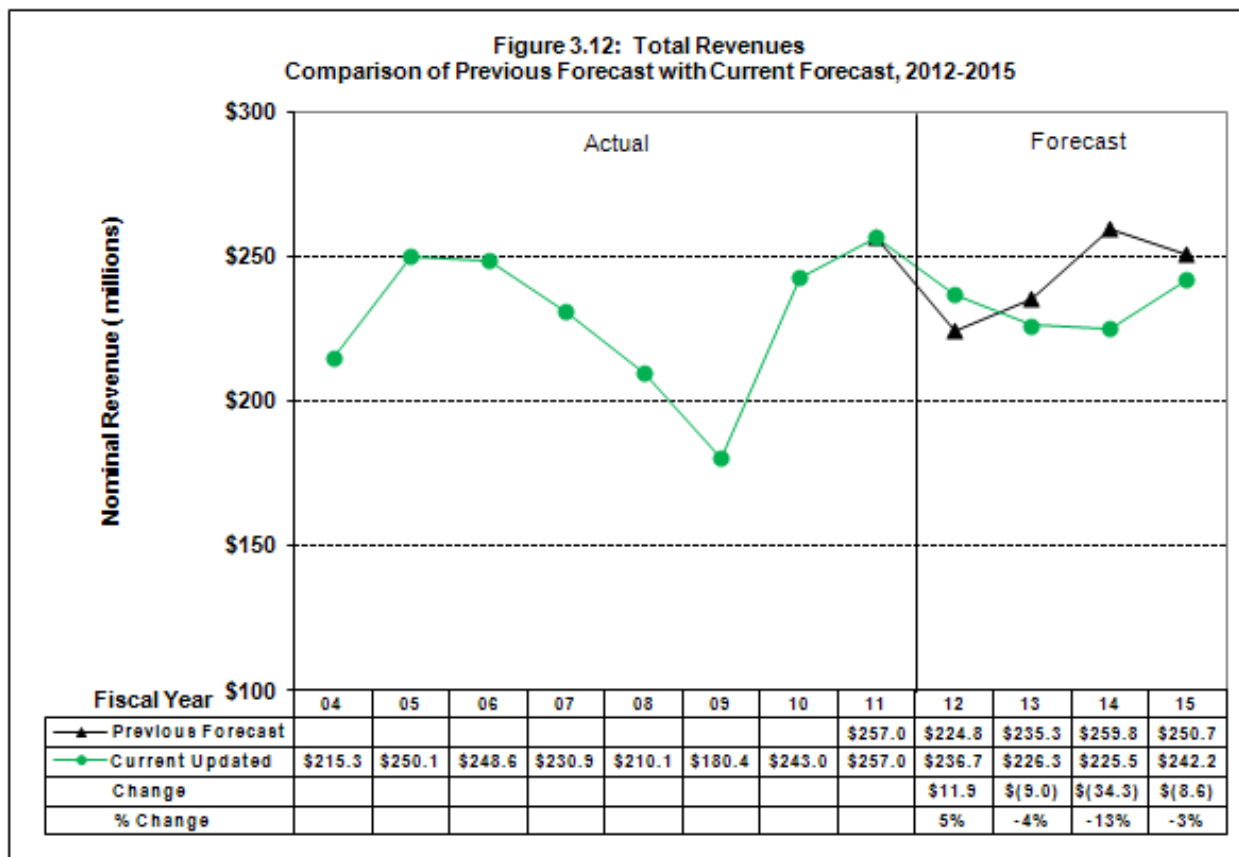
Figure 3.11 shows annual actual and forecasts for all aquatic revenues (geoduck and other) combined. Total forecast revenues for all aquatic lands programs are up \$12.1 million to \$70.4 million for the 2011-2013 Biennium and up \$4.5 million to \$62.2 million for the 2013-2015 Biennium.

Figure 3.11: Aquatic Lands Revenues
Comparison of Previous Forecast with Current Forecast, FY 2012-2015



Total revenues from all sources

Forecast revenues for the current 2011-2013 Biennium (FYs 2012 and 2013) are up from the February Forecast by \$2.9 million, or 0.6 percent, to \$463.0 million (see **Figure 3.12**). The projected increase of \$12.1 million in aquatic lands revenues (see **Figure 3.11**) and \$3.8 million in upland leasing revenues (see **Figure 3.9**) are nearly offset by the projected reduction of \$12.9 million in timber revenues (see **Figure 3.8**).



Forecast revenues for the 2013-15 Biennium (FYs 2014 and 2015) are down from the previous Forecast by \$42.9 million (nine percent) to \$467.7 million (see **Figure 3.12**). This large reduction is due to the large projected decrease of \$47.3 million in timber revenues (see **Figure 3.9**), which is somewhat offset by a projected \$4.6 million increase in aquatic lands revenue (see **Figure 3.11**).

Some caveats

DNR strives to produce the most accurate and objective forecast possible, based on the Department's current policy directions and available information. Actual revenues will depend on future policy decisions made by the Legislature and the Department, as well as on market and other conditions beyond DNR's control. Listed below are issues that could potentially have a significant impact on future revenues from DNR-managed lands:

U.S. and Global Economic Crisis. After offering some encouragement earlier in the year, the budding U.S. economic recovery seems to have stalled out in recent months. The fragile economy faces various serious challenges—there are still too many unemployed workers, the European financial crisis drags on, China's economy is slowing, political gridlock paralyzes Washington DC, and state and local government cutbacks continue.

U.S. Housing Market. New housing starts are finally creeping up from the historically low and flat level they have been in for the last three years. But it remains uncertain when a significant breakout will occur and it could well still be years away. Home prices are finally rising in some locales but continue to fall in many more. Inventories of homes for sale are being reduced, but foreclosed residential properties will weigh down the housing market for years to come.

Timber Sales Volume. Compared with previous Forecasts, the risk of not realizing projected timber sales volumes is greatly reduced by doing away with the assumption that timber sales volumes through FY 2014 would need to be high enough to match the western Washington decadal sustainable harvest level. Even so, falling short of the revised timber sales volume projections due to prospective environmental and policy issues remains the largest risk to the Forecast.

As events and market conditions develop, DNR will incorporate new information into future Forecasts. At this point, we judge the downside to the overall forecast to be greater than the upside because of the risks to the timber sales volume (and therefore to timber removal volume and revenues) as well as the ongoing weakness and vulnerabilities of the U.S. and world economies.

Distribution of revenues

The distribution of timber revenues by trust are based on:

- The value of timber in the inventory (sales sold but not yet harvested) by trust;
- The volumes of timber in planned sales for FYs 2012, 2013, and 2014 by trust; and
- The estimated distribution of the sustainable harvest for FY 2015 by trust.

Distributions of upland and aquatic lease revenues by trust are assumed to be proportional to historic distributions unless otherwise specified.

Since a single timber sale can be worth over \$3 million, dropping, adding, or delaying even one sale can represent a significant shift in revenues to a specific trust fund.

Management Fee Deduction. The underlying statutory management fee deductions to DNR as authorized by the legislature are up to 25 percent, as determined by the Board of Natural Resources (Board), for both the Resources Management Cost Account (RMCA) and the Forest Development Account (FDA). In budget bills, the Legislature has authorized a deduction of up to 30 percent to RMCA since July 1, 2005, now in effect through the current 2011-2013 Biennium.⁵

At its April 2011 meeting, the Board adopted a resolution to reduce the RMCA deduction from 30 to 27 percent and the FDA deduction from 25 to 23 percent. At its July 2011 meeting, the Board acted to continue the deductions at 27 percent for RMCA (so long as this rate is authorized by the legislature) and at 23 percent for FDA. At its October 2011 meeting, the Board approved a resolution to reduce the FDA deduction from 23 to 21 percent.

Given this background of official actions by the legislature and the Board, the management fee deductions assumed in this Forecast are:

	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>
FDA	23/21*	21	21	21
RMCA	27	27	27	27

*23% through 10-10-11, changing to 21% effective 10-11-11

By using 27 percent for the RMCA deduction in FYs 2014 and 2015, the Forecast assumes that the Legislature will approve RMCA deductions of up to 30 percent for the 2013-2015 Biennium (FYs 2014 and 2015) in that biennium's budget bill, continuing its practice which started in FY 2006.

Changes to the RMCA and FDA management fee deductions will be incorporated into future Forecasts as appropriate to reflect future actions by the Legislature and the Board.

⁵ The Legislature most recently authorized the RMCA deduction of up to 30 percent, making it effective through the entire 2011-2013 Biennium, in the FY 2012 supplemental operating budget, Sec. 927, 3ESHB 2127.

Revenue forecast tables

Tables 3.1 and 3.2 on the following pages provide Forecast details. **Table 3.1** focuses on the source of revenues and **Table 3.2** focuses on the distribution of revenues. Both tables include historical and projected figures.

Table 3.1: June 2012 Forecast by Source (millions of dollars)								
Changes are from February 2012 Forecast								
Timber Sales	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
Volume (mmbf)	660	541	730	591	553	580	562	587
Change	-	-	-	-	(103)	(87)	(105)	(10)
% Change	0%	0%	0%	0%	-16%	-13%	-16%	-2%
Price (\$/mbf)	\$247	\$174	\$245	\$339	\$301	\$274	\$300	\$300
Change	\$0	\$0	\$0	\$0	\$19	\$0	\$0	\$0
% Change	0%	0%	0%	0%	7%	0%	0%	0%
Value of Timber Sales	\$ 163.0	\$ 94.0	\$ 178.5	\$ 200.4	\$ 166.5	\$ 158.8	\$ 168.7	\$ 176.2
Change	\$ -	\$ -	\$ -	\$ -	\$ (18.5)	\$ (23.9)	\$ (31.6)	\$ (3.0)
% Change	0%	0%	0%	0%	-10%	-13%	-16%	-2%
Timber Removals	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
Volume (mmbf)	504	506	801	670	508	561	573	610
Change	-	-	-	-	(18)	(55)	(138)	(36)
% Change	0%	0%	0%	0%	-3%	-9%	-19%	-6%
Price (\$/mbf)	\$311	\$252	\$226	\$280	\$317	\$289	\$285	\$293
Change	\$0	\$0	\$0	\$0	\$8	\$8	\$4	\$0
% Change	0%	0%	0%	0%	2%	3%	1%	0%
Timber Revenue	\$ 156.6	\$ 127.2	\$ 181.0	\$ 187.8	\$ 161.2	\$ 162.1	\$ 163.0	\$ 178.8
Change	\$ -	\$ -	\$ -	\$ -	\$ (1.7)	\$ (11.2)	\$ (36.5)	\$ (10.8)
% Change	0%	0%	0%	0%	-1%	-6%	-18%	-6%
Lease Revenue	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
Agricultural and Other Upland	\$ 23.8	\$ 22.3	\$ 21.3	\$ 21.5	\$ 25.7	\$ 23.9	\$ 22.2	\$ 22.6
Change	\$ -	\$ -	\$ -	\$ -	\$ 3.0	\$ -	\$ -	\$ -
% Change	0%	0%	0%	0%	13%	0%	0%	0%
Commercial	\$ 9.2	\$ 9.4	\$ 10.0	\$ 10.1	\$ 10.3	\$ 9.5	\$ 9.5	\$ 9.5
Change	\$ -	\$ -	\$ -	\$ -	\$ 0.8	\$ -	\$ -	\$ -
% Change	0%	0%	0%	0%	8%	0%	0%	0%
Aquatic Lands	\$ 20.4	\$ 20.9	\$ 30.8	\$ 37.7	\$ 39.6	\$ 30.8	\$ 30.8	\$ 31.3
Change	\$ -	\$ -	\$ -	\$ -	\$ 9.9	\$ 2.2	\$ 2.3	\$ 2.3
% Change	0%	0%	0%	0%	33%	8%	8%	8%
Total Lease Revenue	\$ 53.4	\$ 52.6	\$ 62.1	\$ 69.2	\$ 75.5	\$ 64.2	\$ 62.5	\$ 63.4
Change	\$ -	\$ -	\$ -	\$ -	\$ 13.6	\$ 2.2	\$ 2.3	\$ 2.3
% Change	0%	0%	0%	0%	22%	4%	4%	4%
Total All Sources	\$ 210.0	\$ 179.8	\$ 243.1	\$ 257.0	\$ 236.7	\$ 226.3	\$ 225.5	\$ 242.2
Change	\$ -	\$ -	\$ -	\$ -	\$ 11.9	\$ (9.0)	\$ (34.3)	\$ (8.6)
% Change	0%	0%	0%	0%	5%	-4%	-13%	-3%
Note Trust land transfer is not included in distribution revenues.								
This table excludes interest and Land Bank transactions, fire assessments, permits, and fees.								
Totals may not add due to rounding.								
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Table 3.2: June 2012 Forecast by Fund (In millions of dollars)								
Changes are from February 2012 Forecast							RMCA 27%	RMCA 27%
Management Funds	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
041 RMCA - Uplands	\$ 32.0	\$ 26.5	\$ 31.8	\$ 33.9	\$ 29.0	\$ 29.9	\$ 30.6	\$ 32.9
Change	\$ -	\$ -	\$ -	\$ -	\$ 0.4	\$ (1.5)	\$ (2.1)	\$ 1.5
% Change	0%	0%	0%	0%	2%	-5%	-7%	5%
041 RMCA - Aquatic Lands	\$ 8.6	\$ 8.9	\$ 13.9	\$ 17.5	\$ 18.2	\$ 13.8	\$ 13.8	\$ 14.0
Change	\$ -	\$ -	\$ -	\$ -	\$ 4.9	\$ 1.1	\$ 1.1	\$ 1.1
% Change	0%	0%	0%	0%	37%	9%	9%	9%
014 FDA	\$ 18.6	\$ 17.3	\$ 25.9	\$ 25.8	\$ 19.9	\$ 18.4	\$ 17.5	\$ 20.0
Change	\$ -	\$ -	\$ -	\$ -	\$ 0.0	\$ (2.0)	\$ (5.0)	\$ (2.1)
% Change	0%	0%	0%	0%	0%	-10%	-22%	-10%
Total Management Funds	\$ 59.2	\$ 52.7	\$ 71.6	\$ 77.1	\$ 67.1	\$ 62.0	\$ 62.0	\$ 66.9
Change	\$ -	\$ -	\$ -	\$ -	\$ 5.4	\$ (2.3)	\$ (6.0)	\$ 0.5
% Change	0%	0%	0%	0%	9%	-4%	-9%	1%
Current Funds	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
113 Common School Construction	\$ 56.6	\$ 41.5	\$ 47.9	\$ 56.5	\$ 55.2	\$ 56.5	\$ 59.7	\$ 65.5
Change	\$ -	\$ -	\$ -	\$ -	\$ 1.3	\$ (2.2)	\$ (7.6)	\$ (0.2)
% Change	0%	0%	0%	0%	2%	-4%	-11%	0%
999 Forest Board Counties	\$ 52.5	\$ 48.6	\$ 67.9	\$ 70.5	\$ 62.3	\$ 58.8	\$ 56.4	\$ 60.6
Change	\$ -	\$ -	\$ -	\$ -	\$ (0.5)	\$ (4.7)	\$ (14.1)	\$ (6.1)
% Change	0%	0%	0%	0%	-1%	-7%	-20%	-9%
001 General Fund	\$ 3.0	\$ 1.4	\$ 5.0	\$ 4.2	\$ 3.7	\$ 2.8	\$ 2.3	\$ 2.8
Change	\$ -	\$ -	\$ -	\$ -	\$ 0.5	\$ (0.3)	\$ (1.0)	\$ (0.4)
% Change	0%	0%	0%	0%	17%	-11%	-30%	-13%
348 University Bond Retirement	\$ 2.3	\$ 3.4	\$ 1.8	\$ 1.3	\$ 0.9	\$ 1.6	\$ 1.9	\$ 2.0
Change	\$ -	\$ -	\$ -	\$ -	\$ 0.1	\$ (0.0)	\$ (0.3)	\$ (0.3)
% Change	0%	0%	0%	0%	9%	-1%	-15%	-12%
347 WSU Bond Retirement	\$ 1.2	\$ 1.6	\$ 1.2	\$ 1.4	\$ 1.3	\$ 1.1	\$ 1.1	\$ 1.1
Change	\$ -	\$ -	\$ -	\$ -	\$ 0.1	\$ -	\$ (0.0)	\$ (0.0)
% Change	0%	0%	0%	0%	13%	0%	-2%	-2%
042 CEP&RI	\$ 3.8	\$ 3.8	\$ 5.6	\$ 4.9	\$ 5.0	\$ 6.5	\$ 5.0	\$ 4.5
Change	\$ -	\$ -	\$ -	\$ -	\$ (0.0)	\$ 1.2	\$ (0.8)	\$ (1.4)
% Change	0%	0%	0%	0%	-1%	23%	-14%	-24%
036 Capitol Building Construction	\$ 5.2	\$ 5.7	\$ 8.7	\$ 8.7	\$ 8.3	\$ 5.7	\$ 5.8	\$ 6.4
Change	\$ -	\$ -	\$ -	\$ -	\$ 0.8	\$ (1.3)	\$ (2.7)	\$ (1.4)
% Change	0%	0%	0%	0%	10%	-18%	-32%	-18%
061/3 Normal (CWU, EWU, WWU, TESC) S	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.1
Change	\$ -	\$ -	\$ -	\$ -	\$ 0.0	\$ -	\$ (0.0)	\$ (0.0)
% Change	0%	0%	0%	0%	13%	0%	-3%	-3%
Other Funds	\$ 0.2	\$ 0.4	\$ 0.1	\$ 0.1	\$ 0.0	\$ 0.0	\$ 0.2	\$ 0.3
Change	\$ -	\$ -	\$ -	\$ -	\$ 0.0	\$ 0.0	\$ 0.0	\$ (0.0)
% Change	0%	0%	0%	0%	24%	0%	10%	-6%
Total Current Funds	\$ 125.0	\$ 106.5	\$ 138.3	\$ 147.6	\$ 136.9	\$ 133.0	\$ 132.5	\$ 143.4
Change	\$ -	\$ -	\$ -	\$ -	\$ 2.3	\$ (7.3)	\$ (26.6)	\$ (9.9)
% Change	0%	0%	0%	0%	2%	-5%	-17%	-6%

(Continued)

Table 3.2 (Continued): June 2012 Forecast by Fund (In millions of dollars)

Changes are from February 2012 Forecast								
Aquatic Lands Enhancement Account	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
02R	\$ 11.7	\$ 12.0	\$ 16.8	\$ 20.2	\$ 21.4	\$ 17.0	\$ 17.0	\$ 17.3
Change	\$ -	\$ -	\$ -	\$ -	\$ 4.9	\$ 1.1	\$ 1.1	\$ 1.1
% Change	0%	0%	0%	0%	30%	7%	7%	7%
Permanent Funds								
601 Agricultural College Permanent	\$ 4.3	\$ 2.9	\$ 6.1	\$ 2.9	\$ 3.3	\$ 4.4	\$ 4.5	\$ 4.9
Change	\$ -	\$ -	\$ -	\$ -	\$ 0.3	\$ 1.1	\$ 1.0	\$ 1.4
% Change	0%	0%	0%	0%	10%	35%	29%	39%
604 Normal School Permanent	\$ 3.1	\$ 2.5	\$ 4.0	\$ 3.0	\$ 2.5	\$ 2.1	\$ 2.0	\$ 2.2
Change	\$ -	\$ -	\$ -	\$ -	\$ (0.0)	\$ (0.4)	\$ (1.1)	\$ (0.6)
% Change	0%	0%	0%	0%	-1%	-17%	-35%	-21%
605 Common School Permanent	\$ 0.2	\$ 0.3	\$ 0.4	\$ 0.2	\$ 0.5	\$ 0.5	\$ 0.4	\$ 0.4
Change	\$ -	\$ -	\$ -	\$ -	\$ 0.1	\$ -	\$ -	\$ -
% Change	0%	0%	0%	0%	13%	0%	0%	0%
606 Scientific Permanent	\$ 6.0	\$ 2.8	\$ 5.1	\$ 5.7	\$ 4.7	\$ 6.6	\$ 6.7	\$ 6.7
Change	\$ -	\$ -	\$ -	\$ -	\$ (1.0)	\$ (1.4)	\$ (2.8)	\$ (1.2)
% Change	0%	0%	0%	0%	-17%	-18%	-29%	-15%
607 University Permanent	\$ 0.5	\$ 0.1	\$ 0.7	\$ 0.3	\$ 0.3	\$ 0.7	\$ 0.4	\$ 0.2
Change	\$ -	\$ -	\$ -	\$ -	\$ (0.1)	\$ 0.2	\$ 0.0	\$ 0.0
% Change	0%	0%	0%	0%	-19%	43%	6%	10%
Total Permanent Funds	\$ 14.1	\$ 8.6	\$ 16.3	\$ 12.1	\$ 11.3	\$ 14.2	\$ 14.0	\$ 14.5
Change	\$ -	\$ -	\$ -	\$ -	\$ (0.7)	\$ (0.5)	\$ (2.8)	\$ (0.4)
% Change	0%	0%	0%	0%	-6%	-4%	-17%	-3%
Total All Funds	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
Total	\$ 210.0	\$ 179.8	\$ 243.1	\$ 257.0	\$ 236.7	\$ 226.3	\$ 225.5	\$ 242.2
Change	\$ -	\$ -	\$ -	\$ -	\$ 11.9	\$ (9.0)	\$ (34.3)	\$ (8.6)
% Change	0%	0%	0%	0%	5%	-4%	-13%	-3%
Note: Trust land transfer is not included in distribution revenues.								
This table excludes interest and Land Bank transactions, fire assessments, permits, and fees.								
Totals may not add due to rounding.								
Draft report - subject to change without notice								